

## Tamilnadu Iron Age

## Why in News?

A groundbreaking study reveals that Tamil Nadu's Iron Age began as early as **3,345 BCE**, predating the Hittite Empire's iron usage by a millennium.

• **Sivagalai** -It is an Iron Age habitation-cum-burial site in the Thamirabarani river valley in Thoothukudi district.

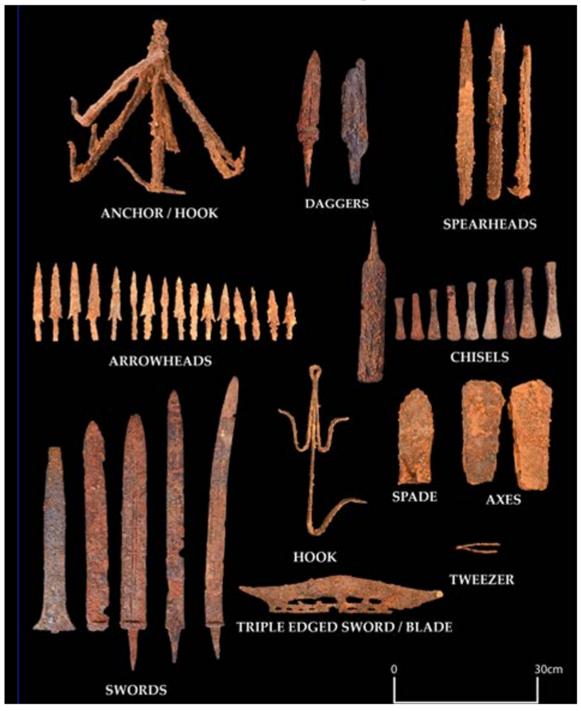


- **Sivagalai excavation** A total of 24 trenches were excavated at these sites, which exposed around 160 urns, a majority of them being redware
- **Findings** Skeletal remains, paddy grains, over 85 iron objects including knives, arrowheads, chisels, axes, rings, and swords, were found at the site.



- Radiometric dating The samples from Sivagalai were analyzed by three prestigious research institutions
  - Beta Analytics in the United States
  - Physical Research Laboratory in Ahmedabad
  - Birbal Sahni Institute of Palaeosciences in Lucknow.
- Advanced dating techniques The samples from Sivagalai, however, were subjected to advanced dating techniques
  - Accelerometer mass spectrometry radiocarbon (AMS14C) dating for charcoal
  - Optically stimulated luminescence (OLS) dating for ceramics.
- **The Report** Findings of the dating study were presented as 'Antiquity of Iron: Recent Radiometric Dates from Tamil Nadu', authored by K Rajan and R Sivanantham.
- **Findings** Radiometric dating of burial urn samples from Sivagalai indicate a thriving Iron Age civilization in southern India in 4th millennium BCE, contemporaneous with copper civilization of Indus Valley.
- While the regions to the north of the Vindhyas were still in the Copper Age, southern
  India may have entered the Iron Age due to a lack of commercially exploitable copper
  ores.
- **Adichanallur charcoal** Adichanallur in Thoothukudi district, of Tamilnadu produced a charcoal sample associated with iron objects that was dated to 2517 BCE.
- First smelted iron For the first time in the world, smelted iron has been dated back to the middle of the third millennium BCE.
- **Hittite Empire (in modern-day Turkey)** This was believed to be the first civilization to use iron, with evidence dating back to around 1,380 BCE.
- Other Iron regions of India Brahmagiri in Karnataka and Gachibowli near Hyderabad, were dated to around 2140 BCE and 2200 BCE, respectively.

## **Adichanallur Iron Objects**



## **References**

- 1. The Economic Times | Did the Iron Age actually begin in Tamil Nadu?
- 2. The Indian Express | Tamilnadu Iron Age
- 3. The Hindu | Sivagalai sheds light on iron's antiquity in Tamil landscape

