

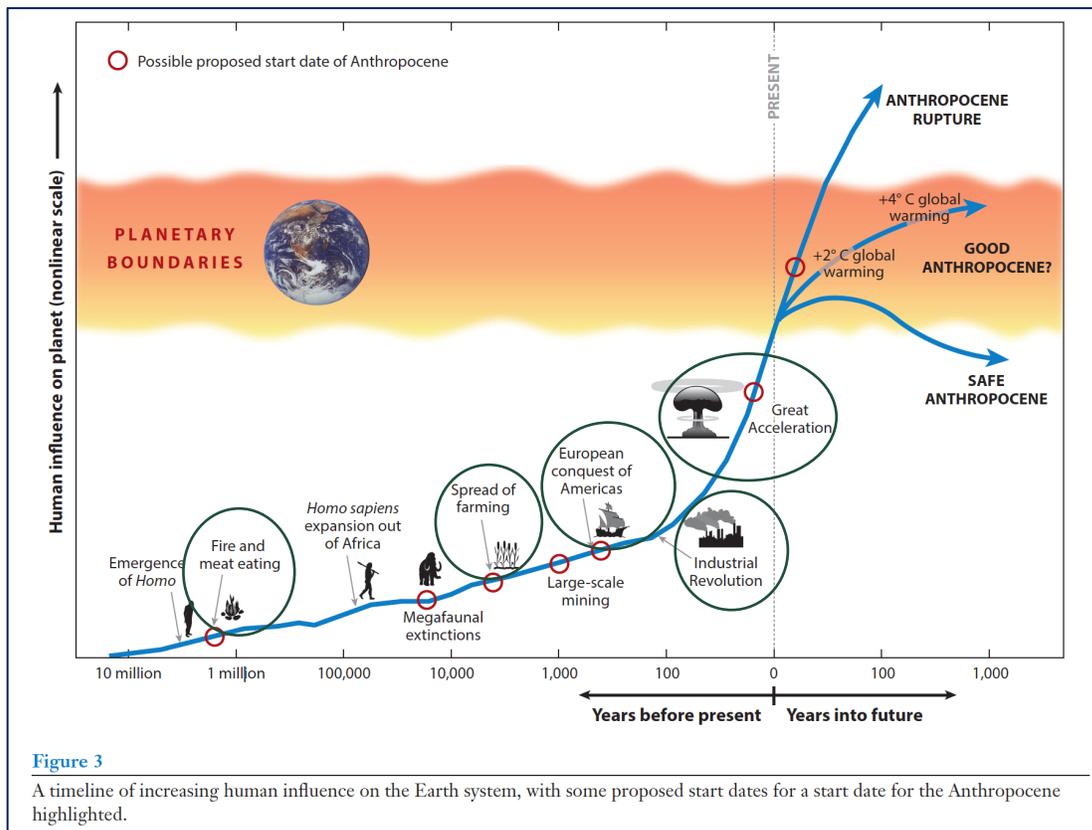
# The “Golden Spike”

## Evidence Sheets:

### First Human Use of Fire (1.8 Million Years Ago)

Depending on the criteria used, the beginning of the Anthropocene can be dated to different time periods:

- Human control over fire (1.8 million years ago)
- Beginnings of agriculture (7-8 thousand years ago)
- Colonization (Circa 1610)
- Industrialization (Circa 1800)
- The Great Acceleration (Mid-20th Century)



Source: Malhi, 2017, p. 90.

○ = Possible “Golden spike”



## Group Task:

---

You have been assigned to a group to examine one of the time periods above. Your group's task is to build a convincing argument about why that date should be recognized as the beginning of the Anthropocene.

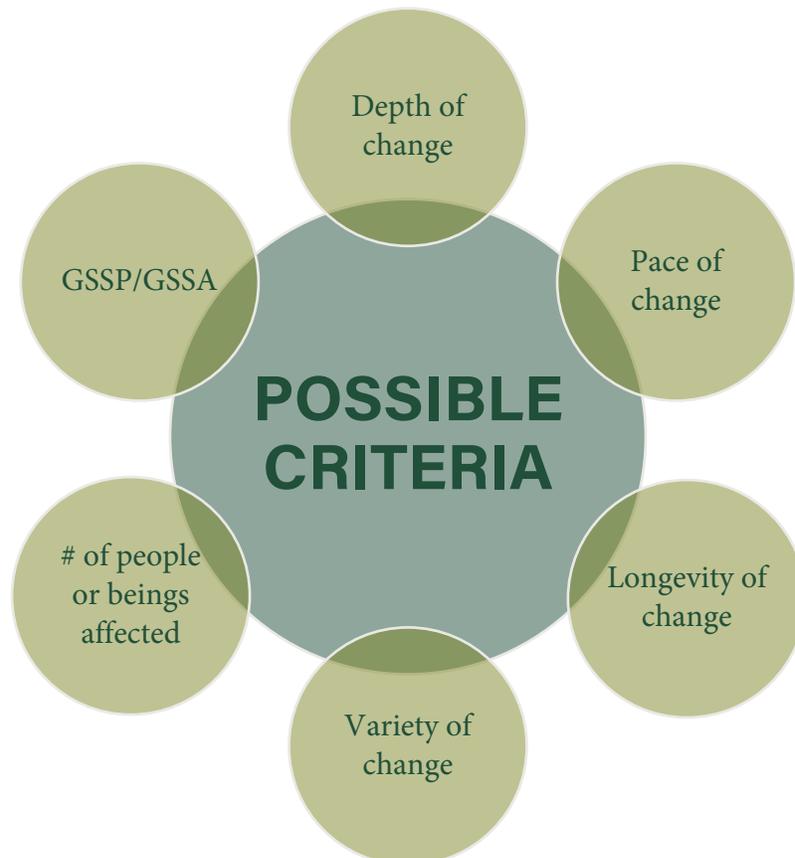
View an interactive timeline for more information by visiting the following link:

<https://tinyurl.com/54387b9f>

Examine the provided materials for your assigned time period (see the text, quotations, images and graphs below). You may also bring in your own information or sources (time permitting).

Develop your argument and record your ideas on the Activity Sheet. Select the most relevant criteria for your time period, from the choices offered below. You may also want to anticipate the arguments of other groups and offer counter-arguments.

Be prepared to present your argument to the class in a brief 2-minute summary!



## First Human Use of Fire (1.8 Million Years Ago)

Prior to the ignition of fire by early humans, wildfires were triggered by lightening, fallout from volcanic eruptions, and meteorite impacts. Roughly 1.8 million years ago, early humans discovered how to ignite fire, and this time period is widely regarded as a turning point in biological evolution. Some scientists suggest this event as an early defining point for the Anthropocene.

The use of fire resulted in changes in human lifestyles and food consumption. The cooking of food brought about a meat-based diet which gradually increased early human energy-level capacities and life expectancies. New tools were developed through fire manipulation, allowing for more extensive hunting which modified the distribution of species in local ecosystems. Human-controlled fire also resulted in extensive land surface fires to clear large areas of trees.

Without human mastery of fire, we would not see elevated atmospheric concentrations of greenhouse gases and aerosols. The loss of habitats and species associated with human changes since the mastery of fire led to what is now called the “sixth mass extinction.”

“The first major impacts of early humans on their environment was probably the use of fire. Fossil charcoal captures these events from the Early Pleistocene Epoch. However, fires are inherently local events, so they do not provide a global GSSP” (Lewis & Maslin, 2015, p. 173).

“Fire is in fact an inescapable consequence of life. But we do hold a species monopoly over the ability to start and within limits to stop combustion. How we kindle, quench, and shuffle fire around Earth is a unique signature of our ecological agency...Research in recent years suggests that controlled fire – cooking – is what allowed us to exchange big guts for big heads. It seems we can’t survive on raw foods alone; we need the added caloric leverage provided by processed food in the form of heating. Fire made us, and we remade fire. Soon early hominins moved from cooking foodstuffs to cooking landscapes” (Pyne, 2014, p.110).

“At one extreme, the Anthropocene is defined to have started when there is any discernible human influence on the local environment, through modification of local ecosystems and shifts in local biodiversity. This can be viewed as the beginning of a long road that leads to modernity, planetary domination, and beyond” (Malhi, 2017, p. 88).

