

04 Ancient civilizations: their rise and fall

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Question of the day

Is our 21st century civilization on the edge of collapse?

Collapse – an overview

Path to the civilisation collapse

- Establishing an "unwritten contract" in any hierarchical society between the people and the ruler
 - securing the prosperity of the society by the ruler/government and the willingness of the people to let them rule
- The preference for staying in power over the prosperity of society by the ruler/government
 - the end of the people's respect for social rules
 - loss of faith in the elites and the fall of civilization

Path to the civilisation collapse

- Long path (decades) leading to rapid and abrupt collapse (weeks/months/several years)
- Small spark sufficient to cause a total collapse (rebellion, natural hazard...)
 - The Great French Revolution (1789)
 - Fall of the Berlin Wall (1989)
 - Arab Spring (2011)



Collapse – different point of view

- Collapse often as a transformation of society, not its extinction
 - relatively small hardships for society (drop in quality of life, technology and education)
 - "cleansing" of the old order and the beginning of a new social structure

Egypt, Old Kingdom

Egypt, Old Kingdom (4 700–4 200 BP)

- Pharaoh (immortal god):
 - care about the well-being of the people (working economy, winning wars, enough work – pyramids)
 - pyramid: national project
 - building pyramids: paid, not slave labour, probably popular with people
- Gradually increasing hierarchization of society and clientelism

History of Egypt





Egypt, Old Kingdom (4 700–4 200 BP)

Heb Sed festival

- ritual to prove pharaoh's permanent power even after 30 years of his rule
- sending a younger representative
- over time only symbolism
- old and incapable pharaoh on throne
- people's loss of trust in state and exploitation of its benefits

Egypt, Old Kingdom (4 700-4 200 BP) - fall

- 4 345–4 200 BP
 - gradual weakening of pharaoh power in favour of powerful nomarchs (regional governors)
- Civil wars ater Pepi II (2278–2184 BC) death
- 4 200 BP: drastic drop in precipitation
 - reduction of normal floods of the Nile between 4 200-4 150 BP
 - drought
 - famine, conflicts and fall of the Old Kingdom

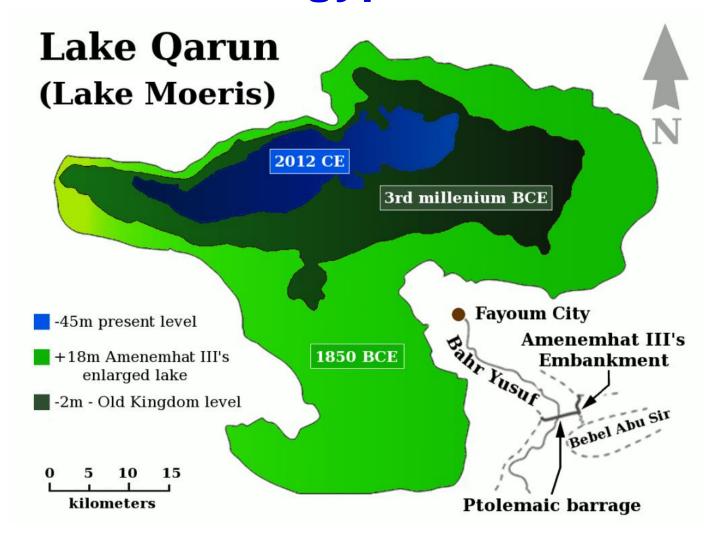


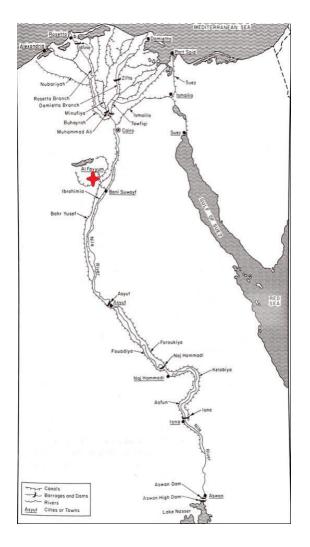


Irrigation system



Lake Qarun/Moeris





Cut down forests of acacia, tamarisk and doum palms



- Lost papyrus groves in the Nile Delta
- Slaughtered herds of large herbivores





Collapse of Mediterranean civilizations

Globalised Bronze Age

growing role of trade: gaining raw materials for bronze weapons

• gold from southern Egypt, copper and its smelting at Cyprus, tin from central

Asia

 development of trade in textiles, foodstuffs, potteries and grain

 a political decision at one end affected the course of a place thousands of miles away



- End of 1st globalization (3 250 CE)
 - the beginning of unrest
 - growing influence of robbers at a time of political instability
 - the need to protect caravans and sea routes
 - growth of cruelty and barbarism (destruction of Babylonia)
 - building of castles and fortifications
 (cyclopean architecture)

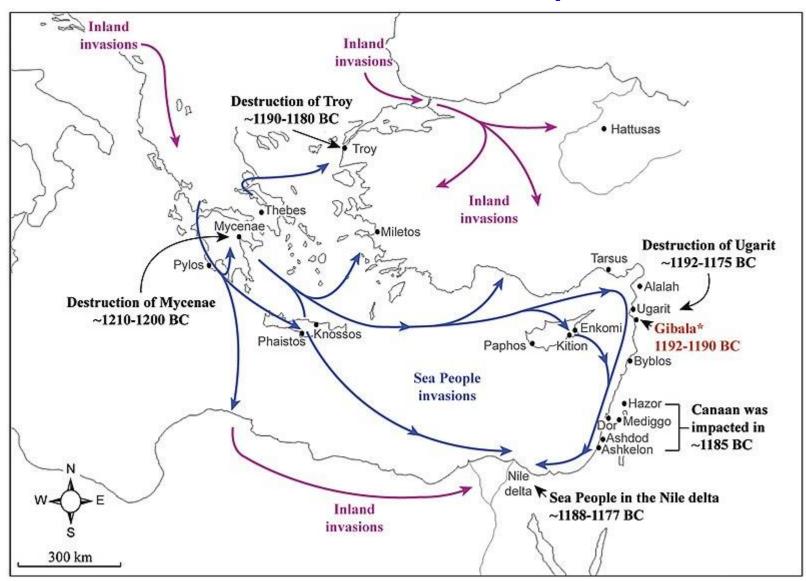


Modern
reconstruction of a
65m long section of
the city wall made of
mud brick, Hattusa,
the capital of the
Hittite Empire in the
late Bronze Age,
Boğazkale, Turkey



- Probable causes of unrest:
 - 3 177 CE: invasion of the Sea Peoples
 - originally barbarians probably from Central Europe and the Danube region, who swept away some of the population on their way
 - economic crisis slowing down trade, politics, wars
 - drying up of the Eastern Mediterranean region crop failures famines and epidemics – migration of entire tribes
- Collapse of civilizations in the Eastern Mediterranean, Egypt and the Middle East
 - subsequent 300 years of dark age (e.g. forgetting writing and reading among some populations)

Invasion of the Sea Peoples



Neo-Assyrian Empire



- Originally a small trading colony but finally a military superpower that capitulated to the relatively weak Babylonian and Median armies
- Assyrian's belief in conquering the world by force
 - new elements in the army: iron weapons, cavalry, horse-drawn wagons
- Neo-Assyrian empire area before 2 900 BP: dry steppes
- Around 2 900 BP: increase in rainfall, rise in agricultural production and growth of empire

- Empire's economy built on agricultural production in a small area in northern Mesopotamia
- Lack of Assyrians to increase agricultural production
 - deportation of enslaved peoples
 - estimate of deportations: up to 4.5 million people in 250 years

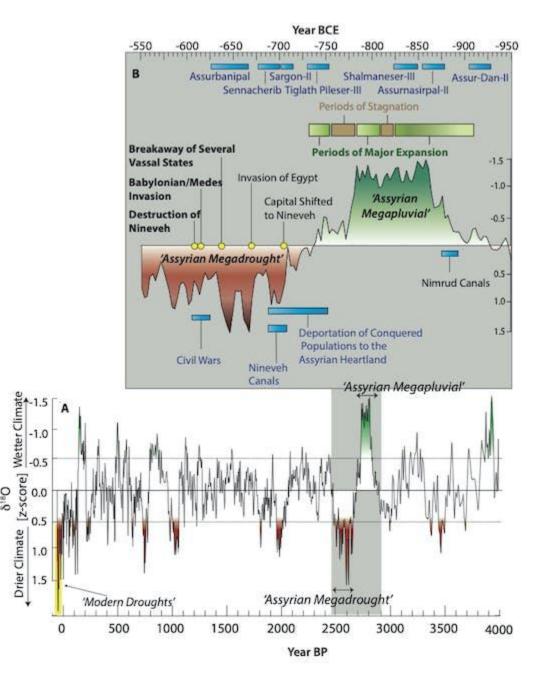
Landscape change

- from steppes to fields and pastures
- building roads and fortified cities

Artist's impression of Assyrian palaces, Niniveh



End of 7th century BP: several decades of drought, collapse of the empire within a few decades



- Probable causes of collapse
 - impact of climate variability, rebellions, civil wars
- Dealing with the effects of drought
 - deployment of settlers to the Nineveh area to build irrigation canals
 - sudden population growth uprisings suppression by army (lack of army in the conquered territories) – rebellions (Babylon, Egypt)
- After the fall of the empire depopulation of northern Mesopotamia at least by 2,401 BP
- Similar drought in 2007–2008 (the worst drought in the last 50 years)

Western Roman Empire

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The Western Roman Empire in 418 AD



Western Roman Empire – direct impact on landscape

Construction of road network

- fragmentation of landscape
- introduction of new species

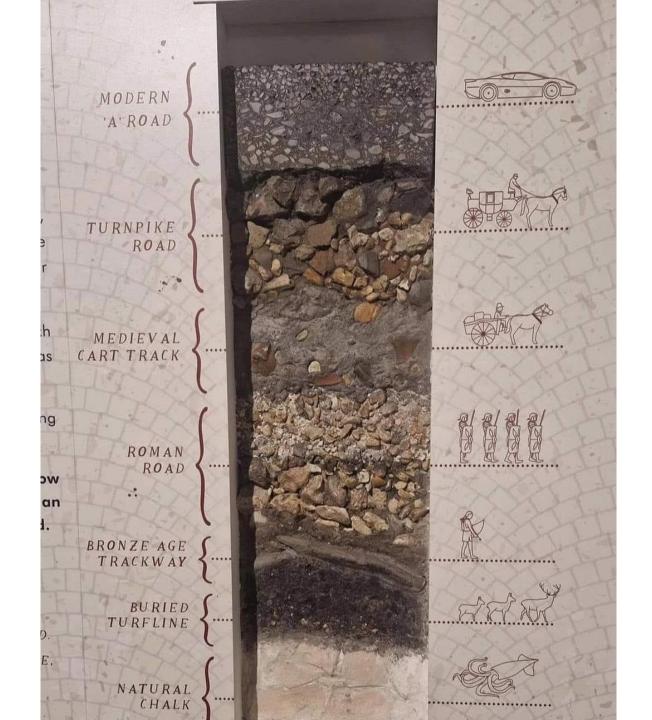
Agriculture

- latifundia
- spread of the metal plough
- new species



Roman road near Klais, Germany

England's iconic A303 road



Western Roman Empire – direct impact on landscape

Deforestation

- Mediterranean
- relocation of pottery production to western and northern Europe due to lack of wood in the centre of the empire

Mineral exploitation

aspects of the industrial landscape, pollution growth

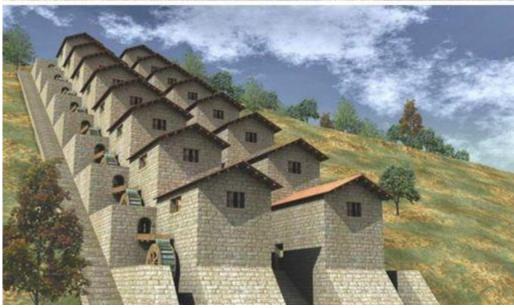
Urbanisation of the landscape

pollution by garbage (sewage), lead poisoning

Barbegal watermills (2 200 BP), southern France

- Sixteen watermills built by the Romans
- 25 ton of flour daily





Western Roman Empire (395–476 CE)

- At the end of Western Roman Empire
 - puppet emperors
 - high taxes
 - rejection of military service by the Romans
 - dependence on abroad grain supplies

Western Roman Empire (395–476 CE)

- After the "collapse" of Western Roman Empire
 - lost of society's complexity (the need for high taxes to control Roman society)
 - maintain of Roman continuity through the continued use of the old Roman administrative systems by new barbarian kingdoms
 - decline of advanced technology (too expansive and unnecessary)
 - simplification of the new system
 - complex cultural transformation rather than collapse

Question of the day

Is our 21st century civilization on the edge of collapse?

Collapse of recent civilization?

Current issues

- today's frequent ignorance of the "unwritten contract" by ordinary people
- exhaustion of contemporary society
- the split in opinions in the Western world
- Basic building stone of any society is vision where I am going and identity – who I am and where I belong
- Do we know our visions and identies?

Collapse of recent civilization?

- Why should we take care of the collapses of past societies?
 - learn more about past civilizations
 - study their long-term evolution
 - analyse various reasons for their fall
 - gain inspiration for our sustainable future

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Thank you for your attention