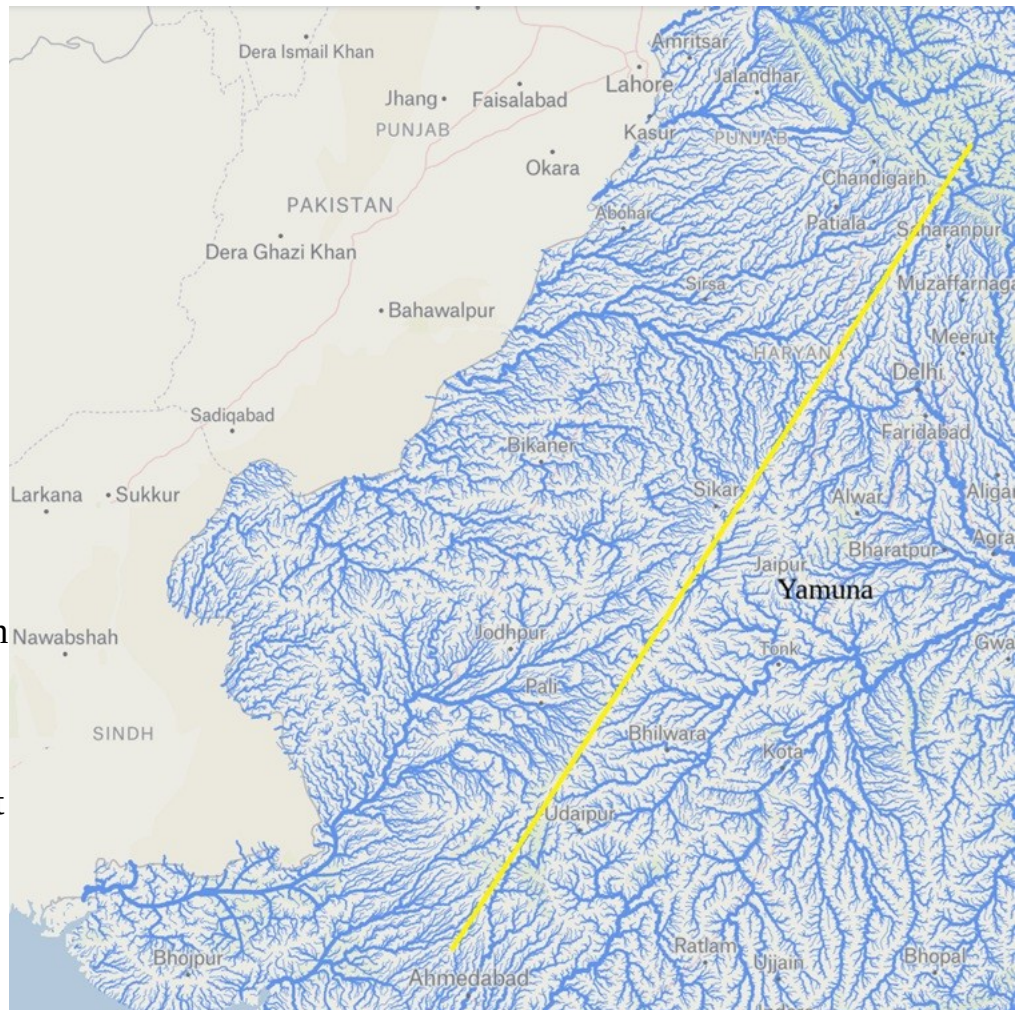


## Thar Desert, an Archeological View

by Potluri Rao In Seattle ©2018 (CC BY 4.0)

Sixty thousand years ago, the Persian Gulf and Thar desert were fertile valleys with rainwater rivers. They attracted humans from Ethiopia. We used computer simulations to reconstruct the landscape of that time to understand human migrations. The Thar desert alternated between fertile valley and desert every 20,000 years, based on the earth's rotation called Precession.

The map is a digital X-Ray of the area to reveal the landscape when Thar was a fertile valley. The yellow line is the Aravalli Ridge. Every 20,000 years monsoon winds changed direction. When the winds blew from west to east, the Ridge tapped the clouds and sent rainwater on the west side to the Arabian Sea. When the winds blew from east to west, the west side was a desert with no rainwater. The east side of the ridge was the Yamuna river. All the people were forced to move to the east side with rainwater. They had 200 years to adapt to the climate change.



The recent switch of wind direction took place around 2,200 BCE, called the global drought, that lasted for almost 200 years. The Thar will become a fertile valley again in 16,000 years when the winds change their direction.