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bazaar -3- climate

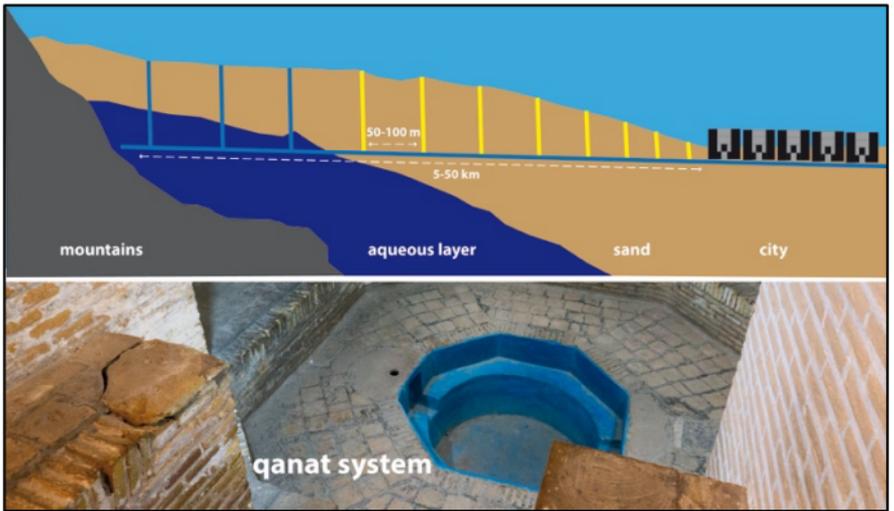
2022

Iran lies between two seas, the Caspian Sea in the north and the Persian Gulf in the south. In the middle of the country is a desert with hardly any rain or rivers running through it. The rivers cross the mountain ranges surrounding the desert. Isfahan is one of the cities in the desert that *is* on a river, but there is a story attached to that. In Thomas Erdbrink's documentary about Iran, this river features as a pitiful entity because the government is squeezing the supply of water, with a reservoir and dam some 100 kilometres upstream. The result is that the dry river bed is now a more familiar sight at Isfahan than rippling water. The underlying cause is not America or some superior power but the general shortage of water. The growth of the cities and industrialisation would seem to make regulation of the available water unavoidable — however bad the consequences for the river in Isfahan.



Cities without a river grew up on the edge of the desert because the caravans from distant countries preferred routes over flat land. These cities got their water from the mountains kilometres away using an ingenious system — the qanat system. It consists of underground aqueducts excavated by hand that served not just local residents but also the bazaars. The underground water courses reached the city at a depth that allowed residents to dig out cellars into which the water flowed. The centre of Yazd has a water museum that tells

visitors all about this system, as well as public underground wells. However, we discovered they were unfortunately dry. It would seem the qanat system has to some extent been replaced by modern water pipes.



Qanat system with water source in the cellar of a home

Not only do the bazaars have to deal with a shortage of water but also with extreme heat in the summer and harsh cold in the winter. The cold is mainly a problem for the bazaars in the north of the country. These conditions explain why the bazaars in most parts of the country were eventually roofed over, even if they were originally open air (see the photo below).



Example of an open-air bazaar in Kerman

A striking feature of the bazaar roofs is the domes, which can be found in a series above the aisles or as a single dome above points where aisles cross and at special spots. We were surprised by the huge variation in structures and architectural expression. You could fill an impressive coffee-table book with photos of them all. But the domes are not just aesthetically pleasing, they also have a function: they ensure the circulation of air in the bazaar.



That works as follows. The domes and walls heat up on the sunny side of the bazaar, causing an airflow inside the bazaar of cold air on the shadow side pushing up the lighter, warmer air on the sunny side, which exits the building through small openings. Heavier, colder air from the sunken floor of the bazaar feeds into this airflow. It is a simple but effective natural air conditioning system. See the drawing above overlaid on the photo of a solitary dome. The photo below shows a bazaar with a sunken floor.



Example of a bazaar with sunken floor in Shiraz

Next... Bazaar 4 – Tehran mosque