



The photo shows a deep-water well in the Sistan and Baluchestan Province, southeastern Iran, allegedly extracting groundwater from 3,000 meters below the surface on August 6, 2018. ● IRNA



A woman drinks water to cool herself off under Ahvaz's scorching +50°C sun — a daily struggle as Iran's water crisis deepens — on July 15, 2024. ● EBRAHIME JORFI/IRIB NEWS

cases — no need to dwell on the past. First is the so-called “deep water” issue, which you’ve surely heard about. At one point, they claimed there are billions of cubic meters of water underground just waiting to be tapped. When I was in office, we wrote a detailed letter to then-president Rouhani, warning that this claim was pure sloganeering, not backed by anyone credible in science.

FAZELI: Do you recall the figures, Mr. Taghizadeh? They said 1,000 billion cubic meters of water flow from the Hindu Kush, under our Sistan and Baluchestan Province, emptying into the Persian Gulf! Just to grasp the scale: the Karun River’s highest flow in the 1960s — its heyday — was around 24 billion cubic meters per year. Nowadays, after looking at the stats from the last decade (including the four or five years when I was out of the ministry), Karun’s annual inflow is maxed out at 14 to 20 billion cubic meters. Yet, here was a claim that 50 Karun Rivers worth of water are lurking underground from the Hindu Kush to the Persian Gulf! This was the brainchild of one MP, who proceeded to burn through billions of tomans drilling down to 3,000 meters, trying to extract this “deep water”. Worst of all, they managed to sell this story to senior officials, who bought into it.

How did they even settle for such a massive amount of water underground?

TAGHIZADEH KHAMESI: The story is lengthy. This “1,000 billion cubic meter” figure Mr. Fazeli mentioned is simply beyond comprehension. Here, everything’s measured in billions, so the real meaning gets lost. This number is 10 times the nation’s total renewable water supply! We sent the president a thorough letter to say that this was junk science. During Rouhani’s government, we didn’t let a single well get drilled for this purpose. They’d claim, for example, “We found 50 liters of water at 3,000 meters in Zabol,” even though you can hit water at 100 meters in the same spot. So why go down 3,000 meters?

So, they actually drilled down to 3,000 meters?

TAGHIZADEH KHAMESI: Yes, three wells were drilled as deep as 3,000 meters. During Rouhani’s administration, we held countless meetings and pushed back hard, even defending our stance in the Parliament. But once his government wrapped up and the late president Raisi took office, this project was resurrected. Who knows where these influential advocates come from, but again, letters poured in, new claims surfaced, and they even put together videos showing water gushing out of freshly drilled wells — as if that first spurt of every new well

proves anything. When Raisi’s government started, I stuck around for five or six months and kept resisting, but eventually, they managed to ram the project through. I’m not sure how much was spent — if I name a sum, I might be mistaken — but it was certainly a huge amount. In the end, the project was shut down and officials finally said, “There’s no water!” Exactly what we’d been saying from the outset.

So, they finally admitted there was no such water?

TAGHIZADEH KHAMESI: Yes. Back to Mr. Fazeli’s contractor point: Governments love to roll out new projects, rarely finishing what their predecessors left behind. This “deep water” drill was one of those. Another is the seawater transfer project — a saga in its own right.

And these water transfer schemes have had serious consequences for certain provinces.

TAGHIZADEH KHAMESI: That’s one of our biggest mistakes. I remember in the 1980s, pasta manufacturing was all the rage. Every official was pushing for factory permits. Back then, I was Khurasan’s deputy governor, and constantly fielded requests for such licenses. Fast forward, and now it’s the same with seawater. Governors would apply pressure for desalination permits, and sometimes the political heat was so intense we’d give in and issue the approvals. Afterwards, we’d ask, “Well, what’s the plan for this water?” Other countries were often invoked for comparison. “Kuwait and Saudi Arabia are taking water from the sea, so why shouldn’t we?” But these comparisons are off the mark. The UAE, for example, has virtually no domestic water resources, but Iran still has about 103 billion cubic meters of renewable water. If only 10% water savings come through in agriculture, we’d free up about 10 billion cubic meters while all the seawater projects combined yield maybe 300 to 400 million, and at what price? \$6

per cubic meter, plus enormous energy costs. They claim this water is meant for agriculture, but aren’t we supposed to be a “knowledge-based” country? How much of that knowledge has truly taken root in agriculture? Its results would be swiftly apparent; If it were ineffective, you’d see it the very next year — but nobody follows up. In my view, the main issue in our water crisis comes down to agricultural use. Expecting the public alone to cut down their use is, in my opinion, a red herring

Do you have precise figures on what percent of the country’s water is used for agriculture?

TAGHIZADEH KHAMESI: Only 7% of our water goes into industry and domestic consumption — let’s say 3% for industry and 4% for drinking. Some claim it’s up to 10%; Fine, let’s go with 10%. But 90% of our water is sucked up by agriculture. Some officials in agriculture don’t buy that. They say there’s a lot of loss in what they receive. My response: Once water flows into your canals, it’s yours — sort out your own network. But they keep saying there’s loss. Either way, that water is lost for good. We burn through 90% in agriculture and somehow pat ourselves on the back because we’ve grown watermelon or touted self-sufficiency in cucumbers — some of which we even export! There was a time when moving agricultural activities to neighboring water-rich countries was floated, but that ran into all sorts of roadblocks. My point is: The water used for drinking — about 7% of the total — actually has the potential for recycling. We’ve built decent treatment plants, but unfortunately, many have been shut down. I’d rather steer clear of pinning this on administrations as there’s no clear record as to which did what. But if anything is to be accomplished in water management, authorities must understand that by 2031, if climate holds steady, our water

use will catch up with our renewable water supply. This cannot be solved with slogans and talk alone. The country’s main headache is water, plain and simple. I don’t lose sleep over industry or drinking water as those can be managed. Agriculture is the real sticking point — we need to draw up crop patterns. Why grow rice in places lacking drinking water? It should be limited to Gilan Province and parts of Mazandaran Province. Sure, people in Golestan Province complain, “Why not us?” but reality is, rice farming only makes sense where annual rainfall is at least 500mm. Golestan Province doesn’t meet the mark.

Dr. Fazeli, frankly, I can’t figure out why, back in the 1960s, the deposed Shah of Iran chose Isfahan Province for the steelworks. But now that this whole network is in place, as you noted, it’s a nightmare to move. Still, for decades, Yazd Province has produced tiles and ceramics. With the current water situation, can’t these industries be relocated to regions with more water supply — down south or up north? Is there really no way out?

FAZELI: Personally, I’ve never conducted a direct study on how tough it would be to relocate these industries, nor how best to pull it off. But a couple of points need underscoring. The country’s main water crisis boils down to agriculture — cutting water use in farming is essential. Drinking water and industry, however, call for two separate notes. First, water use for drinking, industry, and agriculture varies widely from province to province and even between catchments. One region might allocate just 3% to industry and 8% for potable water, leaving 90% to agriculture. But the picture shifts if you zoom in on Tehran Province, particularly Tehran City. Here, agriculture and industry don’t soak up much — most water is channeled into drinking and sanitation. Take Isfahan Province and the

Zayandeh Rud Basin: When its dam was built about 60 years ago, just 60 million cubic meters out of a total 1.05 billion went to drinking water. Today, that’s shot up to about 460 million cubic meters — almost 50% now gets used for drinking and sanitation.

A key caveat: that 50% isn’t just surface water but mostly drawn from groundwater — around 5 to 6 billion cubic meters. Factoring in surface versus underground water is crucial for analysis. Water management must, at heart, be a local issue. Nationwide, perhaps 3–4% of water is used in industry and 8–9% for drinking and health. Iran’s Seventh Development Plan estimates household water consumption at roughly 9 billion cubic meters (recent figures from the Water and Wastewater Company back this up). That’s the broad national picture, but ratios swing sharply by water basin. It’s worth adding: Unlike power, which you can generate in Khorasan and wire to Tehran, you just can’t pipe water around like that. Even if Khuzestan is awash in water, that doesn’t sort out Tehran’s shortage; Water isn’t like electricity, which you can transmit with cables.

But in practice, doesn’t the country transfer water with pipelines across regions?

FAZELI: This approach isn’t really an answer; It’s more of a contractor-driven move. At best, you can sometimes pipe water between adjacent basins. But tons of experts point out that inter-basin transfers often backfire, causing more harm than good. Each case needs individual scrutiny. In my 20–30 years in the trenches with water issues, one lesson’s clear: You simply can’t hand down a blanket verdict. Every area and every case comes with its own baggage.

So, in short, you don’t endorse inter-basin transfers?

FAZELI: That’s like asking whether a knife is good — it all comes down to intent and conditions. Transferring water between basins requires key prerequisites, none of which we’ve lived up to. To move water from Point A to Point B, you must be certain that every local efficiency measure, every drop saved, every price reform, and all loss reductions have already been acted on — and that the remaining gap is for drinking and health, not agriculture or industry. Only when all those boxes are ticked, and there’s still a critical shortfall, should transfer be considered — always taking onboard environmental, social, and win-win agreements between source and destination.

The full debate was first reported in Persian on IRNA.



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The photo shows one of the three new treatment plants inaugurated in the presence of Iranian Energy Minister Abbas Aliabadi in Tehran Province, Iran, on July 15, 2025. ● BORNA