Running Out of Everything: How Scarcity Drives Crisis in Pakistan

David Steven | 03 May 2011

While pessimism is not in short supply in Pakistan, other resources are increasingly scarce. This is driving the country toward a crisis characterized by interlocking economic, political and security dimensions, and has already brought the government close to fiscal collapse.

Yet the dangers are poorly understood. Few of the country's policy elite fully grasp how Pakistan's energy, food and fiscal challenges intersect, nor how quickly problems will spiral as the country's population grows. Meanwhile, the international community is equally fragmented and short-term in its outlook, still working through sector-based silos that leave it unable to see the big picture. With regard to Pakistan, the United States, along with other international actors, still lacks a coherent vision for what it can do to help build a more stable state. On the global stage, Washington has barely begun to address the impact that an era of higher and more volatile resource prices will have on countries such as Pakistan that are both fragile and strategically significant.

In 2011, popular uprisings throughout the Middle East finally made it respectable to admit that resource scarcity will be a major driver of global change in coming decades, as high food prices proved a major irritant for the region's young population already starved of other opportunities. There is more turbulence to come. Over the next 15 years, the world's population will increase from almost 7 to almost 8 billion people. The "next billion" will be Asian or African, and most will live in unplanned, and often chaotic, towns and cities. They will face fierce competition for resources from the rich world, long accustomed to dominating commodity markets, as well as from increasingly assertive middle classes in China, India, Brazil and the other rising powers.

At the same time -- and depending on levels of investment, rates of innovation and political foresight -- the world will bump up against limits to the sustainable consumption of highly strategic commodities such as energy, land, water, food and "atmospheric space" for greenhouse gases and other emissions. The fallout will play a crucial role in the "long crisis" of globalization (.pdf).

In an age of resource constraints, Pakistan is a canary in the coal mine. On any given day, newspaper stories about food prices, energy subsidies and water shortages jostle for space with those on suicide bombings, corruption and the government's failure to deliver basic services to its citizens. When asked what they think is the country's greatest problem (.pdf), 55 percent of Pakistanis single out inflation, which is overwhelmingly driven by food and energy prices. That compares to just 21 percent who pick terrorism -- in a country where a few thousand people are killed by terrorists each year -- and 16 percent who choose unemployment, at a time when only 70 percent of men and 21 percent of women have jobs (.pdf).

The average Pakistani eats less than the average African, while last year's devastating floods pushed rates of acute malnutrition (.pdf) among the country's children to nearly 25 percent in the worst-affected areas. This winter, trees throughout Pakistan's major cities were stripped bare for fuel by people desperate to heat their houses and businesses. And the government is running out of money as it struggles to pay energy subsidies that it lacks the political strength to reduce, while the security implications of resource scarcity are growing in what is already an extremely insecure country.

Going Hungry?

To understand scarcity in Pakistan, one needs to start with the country's demographics. While Pakistan's population growth rate peaked at 3.5 percent in the early 1980s, it is still well more than 2 percent today. There will be 60 million more Pakistanis by 2025, at which time the population will still be growing by 4 million every year. The country is very young, with almost half the population below the age of 20. The scale of its projected population alone presents Pakistan with daunting demographic challenges (.pdf). It must find ways to educate its youngest children (.pdf), who currently make up more than 10 percent of the global population of children not attending primary

school. It also needs to build a city the size of Lahore every three years, as population growth begins to peak in rural areas but continues to soar in urban ones.

Most of all, Pakistan needs jobs. A "baby boom" generation is entering the workforce in growing numbers, its members bringing with them a toxic combination of high expectations and extremely meager skills. If improved economic prospects allow them to find work, the country could enjoy a demographic dividend. If they remain unemployed, a demographic disaster beckons.

Unfortunately, Pakistan has few natural resources, and land is also in short supply. The country now has only 0.32 acres of arable land per capita, and this will decline by almost a third by 2025 if new land is not brought into production. Water is similarly scarce. Per capita freshwater availability is less than a third of that of India and will fall to less than 35,000 cubic feet by 2025 (.pdf). Already, groundwater is becoming increasingly expensive to extract and surface water steadily more polluted. These are worrying trends, since competition for water and land, when combined with the demographic stress of a young population, have been shown to increase the risk of conflict (.pdf) within, and perhaps between, countries. That prospect, it should go without saying, is something Pakistan can do without.

A shortage of land and water has an inevitable impact on agriculture. Pakistan has long been a net importer of food, but its agricultural trade deficit (.pdf) has grown considerably over the past decade. Imports have declined somewhat in recent years, but this actually reflects worsening, rather than improving, food security. World food prices saw rapid increases after 2007, with prices spiking a year later, when the FAO Food Price Index reached 200. Prices subsequently eased, but they have recently shot up again and are now well above the previous 2008 peak. Pakistan is importing less food, not because it doesn't need it, but because it is being priced out of the world markets. Domestic agricultural production, meanwhile, remains soft, registering only 2 percent growth in 2010 in spite of booming prices (.pdf). That this can be ascribed in part to the floods is a sobering reflection of how vulnerable the sector is to regular droughts and irregular, but devastating, natural disasters. A good crop is expected this year, as is usually the case after a flood, but this cannot be taken as a sure sign that Pakistan's agricultural sector is on an upward path.

Unsurprisingly, Pakistani consumers have seen rapid increases in the prices they pay for food. The Asian Development Bank Food Price Index for Pakistan, which is set at 100 for 2001, reached 216 in 2009, with prices up by 45 percent on the previous two years (.pdf). More recently, food inflation has been more than 20 percent for the past six months. Prices have also been increasingly volatile, with commodities hit by a series of mini-shocks: including the sugar crisis of 2009, the flour crisis of 2010 and the onion war of 2011, among others. Food inflation in Pakistan is greater than in any of the Middle Eastern countries that experienced civil unrest this year (although Iran has seen its prices rise even faster). At the same time, Pakistan also has lower per capita income and higher rates of poverty than any of these countries.

Worse still, when the food crisis hit, many in Pakistan had little room for maneuver, as nutritional standards, especially among the hardest-hit poor households, were already conspicuously low. Pakistanis eat no more than they did in 1970, although per capita GDP has more than doubled in that period. In 2008, after the first price spike, it was estimated (.pdf) that half the population was eating less than the recommended minimum of 2,100 calories per day, with 28 percent -- or 45 million people -- classed as suffering from severe food insecurity (defined as less than 1,700 calories per day). Children were particularly affected by the recent floods, but have long been at high risk of malnutrition. In 2001, a household survey (.pdf) found that 40 percent of Pakistani children were stunted and 37 percent were underweight for their age, while one-third of all childhood deaths are thought to be due to poor nutrition (.pdf). According to the World Bank, Pakistan's child malnutrition levels are among the highest in the world.

The composition of Pakistan's diet increases its vulnerability. According to FAO data, cereals, sugar, oil and dairy products account for 80 percent of Pakistan's caloric intake. Overdependence on wheat is especially problematic. Only a quarter of Pakistani households produce it, but almost

all consume it, usually as their primary staple (.pdf). The market is heavily regulated, with the government struggling to set prices that, while remaining affordable to consumers, incentivize producers and reflect the growing cost of inputs -- especially fertilizer, whose price is linked to oil -- and demand from global commodity markets. In 2007, the government made the disastrous decision to export wheat (.pdf) in the hopes of earning foreign currency as global prices rose, but was soon back in the market to import -- at a $100 per ton loss -- as food shortages began to bite. Vegetable oils, meanwhile, reveal a more direct dependence on international markets, with more than 7 percent of daily caloric intake coming from imported oil. Pakistan's struggle to feed its population will only worsen as its population continues to grow and competition for food intensifies on the global markets on which it depends.

The Energy Roller Coaster?

Pakistan's energy troubles are, if anything, even more complex and deeply entrenched. Energy use in Pakistan while roughly comparable with India, remains low, at just more than a quarter of the global average. But demand is growing fast, as Pakistanis struggle to climb the energy ladder. Wood and other biomass still account for 46 percent of total energy use, with nearly 90 percent of rural households dependent on these fuel sources. But the country's rapidly growing cities have a voracious appetite for more-advanced forms of energy, with natural gas heavily used by households and industry, for both transportation, in the form of compressed natural gas (CNG), and electricity generation. Gas is Pakistan's most important indigenous fuel source, accounting for 42 percent of total energy use. It is cheap, with government policy holding down prices, and is being rapidly used up. Although reserves lie undiscovered, prices are too low to attract investment in further exploration, and supply is expected to decline rapidly over the coming years. As a result, Pakistan is becoming increasingly reliant on imported oil, gas and, to a lesser extent, coal.

Energy scarcity has been intensifying since the middle of the last decade. Demand for electricity outstripped supply in 2005, while the same threshold was passed for gas a year later. The future also looks bleak. According to the Pakistan Energy Outlook for 2025, "with indigenous natural gas supply expected to decline in the near future, 'business-as-usual' policies will be unable to meet Pakistan's energy demand for the next 15 years, even for a 4.5 percent per annum GDP growth rate." Energy demand will almost double by 2025 if the economy grows at 4.5 percent, but indigenous production of gas is projected to decline by a third. According to the same report, energy demand currently outstrips supply by more than 10 percent, biomass excluded. Even under a best-case business-as-usual scenario, this gap will grow to 50 percent by 2025. Clearly, Pakistan's economy will be unable to achieve any significant growth if it continues on its current trajectory.

By 2006, Pakistan was already gripped by what energy analyst Muhammad Asif has described as "the worst energy crisis in the country's history." In 2008, however, things got worse, as the country absorbed the global energy shock, with oil reaching $147 a barrel. Electricity companies had become increasingly reliant on imported fuel oil and found their costs rocketing. At the same time, the government was holding down tariffs, with electricity being sold at 30 percent below cost in 2007. (The sector is still running at a loss despite subsequent efforts to charge consumers more.) The result was an explosive growth of "circular debts" (.pdf), with downstream power producers failing to pay upstream energy suppliers, who have in turn been forced to borrow large sums of money. All players rely on explicit or implicit government guarantees for their debt. The sums at stake are not in the public domain, but one company alone, the state owned Oil and Gas Development Company, is said to be owed $1.4 billion.

For consumers, the results have been no happier: Demand outstripped supply by 50 percent in the peak months of 2008, resulting in the use of regular load-shedding to ration electricity. These scheduled outages are often savage, lasting for up to 18 hours a day. In Lahore, for example, residential users are currently subject to (.pdf) more than eight hours of load-shedding each day, while the situation is worse in rural areas. Gas is also increasingly rationed, with regular and sometimes lengthy interruptions of both supplies to industry and deliveries to CNG stations, which cripples transportation.

Public reaction to the energy crisis has swung from resignation to violent protest and back again. Energy riots have become commonplace since 2008, with Asif dubbing the period "the modern Stone Age." The first day of 2009, for instance, was greeted by "blockade of roads, gunshot injuries, destruction of public and private properties, looting and clashes with the police." The offices of WAPDA, the state-owned utility, were attacked, as were the offices and homes of politicians. Pakistani authorities have lost control of the energy crisis and of the public's response to it.

Undermining Resilience?

Pakistan's struggle with resource scarcity is a reflection of a broader lack of resilience: its vulnerability to more-expensive commodities compounded by chronic underinvestment, calamitous policy decisions and a failure to respond to signs of impending crisis.

But there is also a feedback loop at work, as scarcity further undermines the immune system of a country that has long languished on the critical list. Most obvious is the economic damage scarcity causes, with the government estimating losses from the energy crisis (.pdf) at 2 percent of GDP during 2009-2010 alone. Indeed, according to the International Monetary Fund, high and volatile food and energy prices bear a heavy responsibility for knocking Pakistan's economy off the robust growth path it enjoyed between 2001 and 2007. Strong growth is simply not possible without increased access to energy, while food and fuel inflation have rapidly eroded the living standards of both the poor and the middle class. Moreover, there is no sign of Pakistan's economy breaking free of the shackles that resource scarcity has placed on it any time soon. The State Bank continues to warn of a disproportionately high risk (.pdf) to domestic growth from further increases in global commodity prices. If commodity markets sneeze, Pakistan is likely to catch something much nastier than a cold.

The politics of scarcity have also proved corrosive for a country that has a turbulent political history, and which is being pushed to the brink by multiple domestic security threats. Pakistan's government has been teetering on the edge of bankruptcy since 2008, when it required an IMF rescue. The $11 billion loan package was conditional on rapid cuts to the deficit, to be achieved by cutting energy subsidies and increasing the tax base. Attempts to implement these measures have pushed the government close to collapse. In January 2011, for example, the government tried to cut fuel subsidies but was forced into an embarrassing U-turn in order to maintain its splintering majority. (It still hopes to be the first democratically elected government for decades to serve a full term.) Energy subsidies accounted for more than 7 percent (.pdf) of all government expenditure in the second quarter of the current financial year, not including hidden subsidies to the electricity sector. As a result, the Asian Development Bank warned that the government will overshoot even its revised -- and unsustainable -- target of 5.5 percent for its annual budget deficit.

Finally, there are obvious, but unpalatable, security implications for a state that cannot meet demand for basic commodities. Few commentators see popular unrest as posing a systemic threat in Pakistan, but the examples of Egypt and elsewhere suggest the risks should not be underestimated. The country has already seen energy riots in urban areas, while protests by farmers and fishermen have also become common. Meanwhile, competition for water, and perhaps for energy, has the potential to poison already fragile relationships between Pakistan's provinces as well as to increase ethnic tensions. Water is also already one of many irritants (.pdf) in the country's relationship with India.

Of most immediate concern, however, is the opportunity offered by resource scarcity to Pakistan's vibrant ecosystem of terrorists and militants. In 2005, production from the Sui gas field, which accounts for 45 percent of national production, was halted for more than a week due to sabotage. The main gas pipeline to Lahore was cut at the same time. Attacks on gas pipelines and electricity grids have continued with depressing regularity ever since. Water is also a potential target, with analysts warning (.pdf) of the threat from the Taliban to the Tarbela Dam, Pakistan's largest dam. When a country is already teetering under the weight of resource limits, disruptive action

becomes ever more appealing to militants as a means of pushing it over the edge.

Facing Up to Scarcity?

Here then, are five implications for the future.

First, scarcity already has Pakistan in its clutches, and its grip is likely to tighten. In an era of scarce resources, Pakistan brings few cards to the table, and at the same time has a knack for making the worst of its poor hand. Demographic trends mean that pressure on land and water, as well as demand for food and energy, will grow fast and for a long time. Supply constraints, especially for energy, seem very likely to constrain economic growth and may also continue to weaken governments, thereby threatening security. A resource-related collapse cannot be ruled out, especially if the price of oil climbs to unprecedented levels. The effect of climate change is further darkening an already bleak picture, and its impact will intensify. Pakistan is extremely vulnerable to climate impacts and is likely to experience increased monsoon variability, loss of glacier flow, reduced agricultural productivity and more-frequent natural disasters - all of which will threaten food, water and energy security.

Second, efforts to address these problems are very likely to fail, unless policymakers start to treat scarcity as an interrelated challenge, with implications for economics, politics, society and security, as well as a strong international dimension. As energy becomes more expensive, so does food -- due to higher costs of fertilizers and transport, for instance -- and water, due to higher extraction costs. Water scarcity degrades hydroelectric capacity and agricultural productivity. Economic stagnation and an empty public purse reduce or eliminate the country's ability to invest its way out of trouble, and starve young people of the opportunities they need to advance. Political weakness at home will increase the likelihood that the Pakistani government will continue to make a hash of its response. Meanwhile, international decisions have the potential to make things worse for Pakistan, with downstream consequences that will subsequently rebound on the rest of the world. Higher commodity prices are probably a given over the short to medium term, but steps to at least dampen volatility could help Pakistan step back from the brink.

Third, it is important not to lose sight of the potential upside. In the best-case scenario, Pakistan could become a laboratory for increasing resilience, as the intensity of its problems forces innovation at all levels from the national to the local. Already, the country is experimenting -- at scale -- with social protection and some highly original public-private partnerships (.pdf). Perhaps Pakistan could develop the next generation of social protection schemes, by including access to a basic quota of energy with existing cash transfers. It could also use public-private partnerships to expand access to solar water heaters and other proven distributed energy systems. To make the most of its agricultural potential, it could invest in readily available technologies such as drip irrigation, while shifting production from wheat to less-water-dependent crops.

Fourth, in the long term, a great deal will depend on how quickly Pakistan's explosive population growth is brought under control, so that better-educated parents -- especially mothers -- can invest more resources in fewer children. By mid-century, the country is projected to have 335 million citizens under the United Nation's medium variant scenario. That is 150 million more people than today, with no peak in sight. Under the low variant, the population would still see daunting growth, but would be less than 300 million in 2050 and close to stabilizing, offering Pakistan some chance of coping in a resource-constrained world. The relationship between demography and scarcity is a complex one, however. On the one hand, insecurity has the paradoxical effect of slowing the transition toward smaller families. On the other, demographic change is associated with urbanization and the rise of an educated middle class, which will increase competition for resources. Escape from the demographic trap, in other words, will not be easy to achieve.

Finally, we must also confront the fact that failure is likely, and that collapse cannot be ruled out. Pakistan is going to continue to face more than its fair share of disasters, and many of them will have a resource or environmental dimension. The international community still has an extremely poor understanding of what can be done to keep a fragile society functioning, and has far too few

resources available to protect citizens when their governments fail them. In the long crisis of globalization, many states will struggle with living in a world where resources are scarce. Pakistan is already on the front line. We should remember that where it leads, others will follow.

David Steven is a fellow at the Center on International Cooperation at New York University.