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In this issue:

- **Agriculture & Water Investments**
- **Food Security in the Middle East**
- **Fortune 500 Enviro Initiatives**
- **Water Conflicts Hit United States**
- **Global Economy & Oil Prices**
- **U.S. & Offshore Wind Investments**

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SPOTLIGHT ON: SUSTAINABILITY & THE FORTUNE 500

Corporations Focus on Enviro *and* Business Bottom Line

"We want to be a sustainable business in every sense of the word."

CEO Paul Polman has made no secret of his core focus at Unilever, the Anglo-Dutch conglomerate which sells a wide range of products used by more than 2 billion people every day. Unilever is one of many Fortune 500 companies embarking on sustainability initiatives to boost profits while reducing harmful environmental and social impacts.

To achieve its aim of doubling product turnover, Unilever has set out three broad-minded goals for its new campaign:

1. Improve the health and well-being of more than a billion people;
2. Halve the group's environmental footprint across the total value chain, including greenhouse gases, water and waste;
3. Source all agricultural raw materials sustainably

Polman insists there is "no conflict between sustainable consumption and business growth." In fact, he says, it is quite the opposite. "There is a compelling case for sustainable growth – retailers and consumers demand it and it saves us money."

Part of Unilever's sustainability push includes an educational campaign to make consumers aware of how their actions can reduce greenhouse gas emissions and save money. For example, consumer use results in 68% of greenhouse emissions for many Unilever products. Raw material processes account for 26%, manufacturing and transport together account for 5% and disposal rounds out the total at 1%. Likewise, Unilever is educating consumers on cost-saving conservation strategies. For example, did you know that families who cut down their daily showers by as little as 2 minutes can save 21,000 liters of water a year and as much as \$150 a year?

German chemical group BASF and sportswear manufacturer Puma are two other examples of companies that have enacted sustainability initiatives to benefit the environment and their bottom line. Like Unilever, these companies have aligned their business models with the harsh realities at hand.

Our world is facing perilous energy, water, agriculture and resource challenges. Companies that fail to adapt as required may find themselves behind the curve.

Agriculture & Water Challenges Will Require Major Sector Investments

In 2007 and 2008, a sharp rise in agricultural commodity and food prices triggered grave concerns about Food Security and increased poverty throughout the world. While the threat of a prolonged food-price shock receded with the weakening global economy in the second half of 2008 and a relaxation of export bans, many of the key factors causing volatility in food prices and availability remain in play.

The majority of Arab countries import 50% to 90% of their food requirements. As the world's largest net importers of cereals, these countries are more exposed to severe swings in agricultural commodity prices. This vulnerability will probably be exacerbated in coming years by strong demographic growth, low agricultural productivity and their continuing dependence on global commodities markets.

Gulf nations are facing food security risks that may threaten national security. Water scarcity concerns are also severely constraining domestic food production. Projections suggest that by 2050 renewable water will fall below 500 cubic meters per capita and arable land to 0.12 hectares per capita. Improved farming technologies can boost yields, which are currently only half of the average yield worldwide – a gap that is still growing.

These startling food and water shortages require active investment programs. Gulf countries could manage their import exposure more effectively by investing in infrastructure to produce, store, and transport food. Investment in water management will also be critical for Middle Eastern agricultural productivity.

Equally important is investment in agricultural research and development, which despite average rates of return of 36% in Middle East countries, receives less funding than in the rest of the world. Climate change, moreover, is likely to have a significant impact on domestic food production in Middle East countries, and research and development are urgently required to drive the next green revolution.

Qatar has been extremely proactive in addressing these issues through the creation of the Qatar National Food Security Programme. The programme's mission is to develop a comprehensive and sustainable long term solution to the challenges that the State of Qatar faces with regards to its Food Security. The objective is to increase and enhance domestic agricultural production and, in parallel, strengthening the security of food imports to alleviate the food supply deficit that Qatar faces. Qatar plans to utilize solar energy to desalinate seawater, which will then be used for agricultural irrigation.

How to Address Food Security Concerns? Dual Strategy Used to Meet Challenges



In an effort to secure food supplies to the region and safeguard against market fluctuations, GCC governments are investing heavily in outside farmland acquisitions and leases and injecting money into the domestic food production industry.

Saudi Arabia is leading the way. The Kingdom is currently investing US\$23.1 billion in food security initiatives, including a US\$12.3 billion allocation to the development of the food processing sector. It has also furnished US\$6 billion in financial and oil aid to Pakistan in return for agricultural land.

The UAE has recently acquired or leased more than 1.4 million hectares of arable land in Sudan, Pakistan, and Morocco, while investing US\$1.4 billion in the country's value-added food manufacturing sector. This has resulted in 150 food processing plants.

As part of an effort to be completely self-sufficient by 2023, Qatar has invested US\$5.1 billion in various food security initiatives, including leasing 400,000 hectares of land in Kenya against a US\$3.5 billion loan to the Kenyan government. Qatar has also established a US\$1 billion joint venture with Vietnam, 90 percent of the funds will be invested in various sectors, including agriculture.

Ensuring food security remains one of the most important issues for all GCC countries. Nearly 40.6 million people live in the six-nation GCC region, however this is expected to jump to 50 million by 2020. Food consumption is growing at a rate of 4.6 percent annually to reach over 51 million tons, further adding to the severe strain on the region's food security. According to a recent report by the Economic Intelligence Unit, the Gulf's food imports could widen by a massive 105 percent from \$25.8bn in 2010 to \$53.1bn by 2020.

"For a region such as the Gulf, which imports around 90 percent of food items to feed its people, there is an added urgency to secure sources that are safe and sustainable," said Sheikha Lubna Khalid Al Qasimi, Minister for Foreign Trade and past Minister of Economic and Planning of the UAE.

As Resource Strain Worsens, U.S. Fears Outbreak of Regional "Water Wars"

"Water scarcity will worsen due to unsustainable use and management of the resource as well as climate change," warns the *OECD Environmental Outlook to 2030* report. "The number of people living in areas affected by severe water stress is expected to increase by another 1 billion to over 3.9 billion."

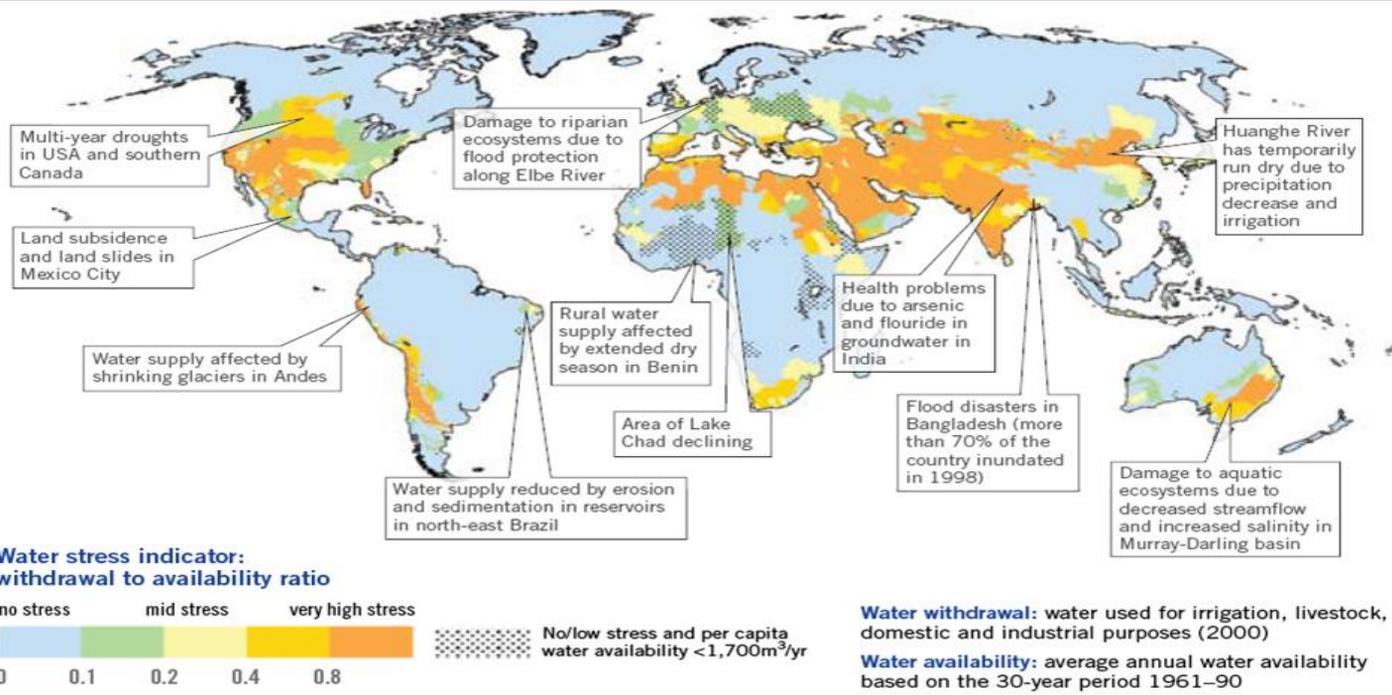
Dire consequences are being felt in developing and developed countries alike. Rapidly growing municipalities in the United States are at risk. As local water shortages worsen around the country, domestic water disputes may increase in frequency and severity.

The alarming global supply-demand imbalance is amplified by pollution and by the over-exploitation of underground aquifers. The Ogallala aquifer under the Great Plains may run dry in two to three decades given recent withdrawal rates. Over the past twenty years, groundwater levels in Great Lakes communities like Chicago and Milwaukee have fallen by 1,000 feet.

Aging water pipes and infrastructure poses another challenge. The U.S. has roughly 700,000 miles of pipelines, many of which are over half a century old. Substantial investment is needed to fix or replace them. Pipes typically account for about 70 percent of the cost of a water system.

As strain on global water resources increase, the effects are being felt worldwide. The graphic below illustrates just a few examples of how water concerns are impacting health, ecosystems and economic growth.

Worldwide Water Stress



Nearly 5 million people who live in coastal metropolitan areas face significant dangers from rising sea levels. According to recent reports from the non-profit group Climate Central and others published in the journal *Environmental Research Letters*, rising sea levels can result in more severe and frequent flooding, as well as damaging storm surges. Weather and climate experts warn that the risk of "once-a-century" flooding has doubled as a result of this increase.

"Sea level rise is like an invisible tsunami, building force while we do almost nothing," remarked Ben Strauss, expert on ecology and evolutionary biology and COO of Climate Central. "We have a closing window of time to prevent the worst by preparing for higher seas."

Scientists say that the effects of global warming are contributing to sea level rise. Accelerated melting of glaciers and ice sheets causes the expansion of the earth's ocean waters. Since 1880, world sea levels have risen by 8 inches. By the end of this century, forecasts for sea level rise range from 2 to 7 feet, with the majority predicting a rise of 3 to 4 feet taking into consideration a projected 2 to 3 degree F rise in global temperature.

Furthermore, the effects of global warming may increase the likelihood of what is called a "once-in-a-century" flood for low-lying coastal areas. By 2030, two-thirds of the 55 coastal locations surveyed by Climate Central will face a 55% increased risk. For the majority, risks of these dangerous flood occurrences may triple.

Severe floods, rising seas and storm surges can result in tremendous damage. South Florida alone has an estimated \$30 billion worth of at-risk property. Louisiana, New Jersey, North Carolina, Maryland and Virginia face risks as well.

Data Suggests Global Economy “More Vulnerable than Ever” to Price of Oil

Rising oil prices have had significant negative impact on the global economy, according to new economic research. As oil prices approach historical highs, the global economy may suffer from another “price shock,” warns Dr. Minqi Li, associate professor of economics at the University of Utah.

Dr. Li’s regression analyses of world economic growth rate versus change in world oil consumption suggest that the global economy has not, in fact, become less dependent on oil in recent years, contrary to much previous research.

Furthermore, Dr. Li’s models show that world oil supply has become much less responsive to oil price increases:



Despite the fact that the economy is not heavily industrialized, oil consumption in Saudi Arabia ranks highest in the world. According to International Energy Agency (IEA) data, Saudi Arabia consumes about three million barrels a day – the equivalent of approximately one billion barrels each year.

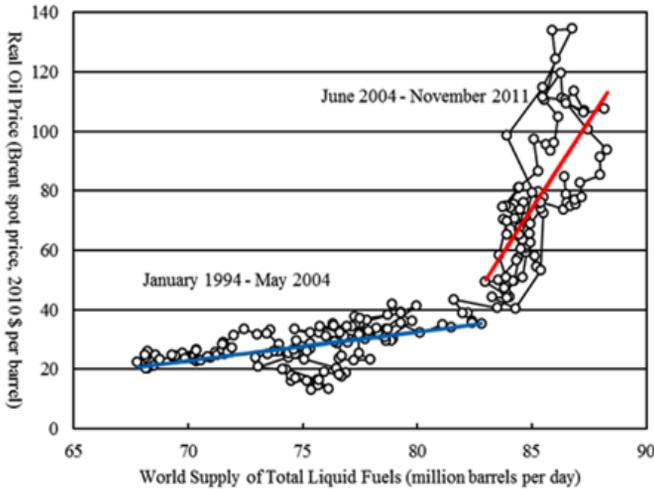
Divide the total consumption figure by the Kingdom’s population of 27 million people results in oil consumption of approximately 40 barrels per person each year. This is the highest per capita oil consumption rate in the world. To put such an oil appetite in perspective, Saudi Arabia’s rate is more than four times the rate of oil consumption in the United States, five times the rate of South Korea, and eight times the rate of consumption in Japan. Saudi Arabia consumes more oil per person than these other more populated, more industrialized nations... and that is becoming a problem.

Even more alarming is the fact that Saudi Arabia’s oil consumption has continued to grow, even as that of the industrialized nations has fallen. In the United States, which previously faced extensive criticism for its oil guzzling habits, per capita oil consumption has fallen from 11 barrels per person in 2005 to less than 9.5 barrels per person in 2010, a decline of about 14 percent in five years. Likewise, Japan’s usage has declined from 7 barrels to around 5 barrels per person during the past decade, a decline of 25 percent.

By comparison, consumption of oil in Saudi Arabia has jumped from around 30 barrels to over 40 barrels per person, during the past decade – a startling increase of 33 percent. Some estimates place Saudi Arabia’s oil consumption growth rate as high as 5 percent annually. If current trends continue, some experts expect Saudi domestic consumption to top seven million barrels a day by 2030! This is deeply concerning, because the Kingdom currently produces just under 10 million barrels of oil per day in total.

Saudi Arabia’s heavy – and growing – domestic oil demands may eat into the amount of available oil resources for export. Oil revenues are crucial for the Kingdom’s economy; a potential supply squeeze in the future could be felt harshly, not just for the Kingdom itself, but for the rest of the oil-consuming marketplace which has long looked to Saudi Arabia as a never-ending well of oil resources. We believe this situation warrants close monitoring and attention.

Figure 2. World Oil Production and Prices (January 1994-November 2011)



As seen in the graph above, from January 1994 to May 2004, an oil price increase of \$0.97 on average brought about an additional influx of one million barrels of oil to the world’s daily supply. From June 2004 to November 2011, however, it took an increase of \$11.80 dollars to bring about the same increase in daily oil supply. The observed “world oil supply curve” has dramatically steepened by nearly 12 times. This may have serious ramifications for projects of future global economic growth.

“If world oil production does peak and start to decline in the near future, it may impose a serious and possibly an insurmountable speed limit on the pace of global economic expansion,” says Dr. Li.

To ensure sustained global economic progress despite the challenges of rising oil prices, we must seek out opportunities in the “Bridge Period” as emerging energy technologies become more cost effective, and traditional energy production becomes cleaner and more energy efficient.



Iberdrola to Focus on U.S. & Offshore Wind

Spanish wind giant Iberdrola has completed construction of a 304MW wind farm in Ohio. Already, the company has signed a long-term power purchase agreement (PPA) to ensure the sale of 100MW of wind-generated electricity over the next 20 years.

Making further headway in the United States market, Iberdrola has commenced work on a 189MW wind power project in California, called Manzana. Two PPA's have been put in place for that project as well, including an agreement with major utility San Diego Gas & Electric. California's Renewables Portfolio Standard (RPS) dictates that California's electricity mix must increase its use of renewable energy to 20% of all retail sales by 2017.

Now the second-largest operator after NextEra Energy Resources, Iberdrola announced it has over 5.2GW of wind power capacity located in the United States. In 2011, the company added 730MW worth of wind power assets to its portfolio.

Iberdrola has found the North American market to be welcoming to wind farms, largely because of regulated utility rates on renewable power generated by the plants. Long term contracts for guaranteed power purchases provide a layer of stability and more consistent investment returns; integral features which have been absent from the company's efforts in Europe.

Off-shore wind resources are another key area of focus for Iberdrola. Joint ventures with Danish utility Dong Energy are moving forward off the Northwest English coastline, as is an effort in the German Baltic Sea. Iberdrola has a pipeline of nearly 10GW of offshore capacity that will become operational over the next few years and make a big splash in the global offshore market.



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