Preface

Reassessing the World Food Prospect

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Japan suffers from dust storms originating in China in late winter and early spring. While the Japanese may complain about the resulting dirty windows from the dust and the brown rain, South Korea is exposed more directly. For instance, on April 12, 2002, South Korea was engulfed by a huge dust storm from China that left residents of Seoul literally gasping for breath. Schools were closed, airline flights were cancelled, and clinics were overrun with patients having difficulty breathing.

Each year, residents of eastern Chinese cities such as Beijing and Tianjin hunker down as the dust storms begin. In addition to having problems with breathing and the dust that stings the eyes, people are constantly working to keep dust out of homes and to clean doorways and sidewalks of dust and sand. Farmers and herders, whose livelihoods are blowing away, are paying an even heavier price.

China is now at war. It is not invading armies that are claiming its territory, but expanding deserts. Old deserts are advancing and new ones are forming, like guerrilla forces striking unexpectedly, forcing Beijing to fight on several fronts.

In China desert expansion has accelerated with each successive decade since 1950. China's Environmental Protection Agency reports that the Gobi Desert expanded by 52,400 square kilometers from 1994 to 1999, an area half the size of Pennsylvania. With the advancing Gobi now within 388 kilometers of Beijing, China's leaders are beginning to sense the gravity of the situation.

The dust storms are influential both socially and economically. Millions of rural Chinese are forced to migrate eastward as the deserts claim their land. The Asian Development Bank estimated that 4,000 villages in Gansu Province risk being overrun by drifting sands. The U.S. Dust Bowl of the 1930s forced some 2.5 million "Okies" to leave the land, many of them heading west from Oklahoma, Texas, and Kansas to California. But the dust bowl forming in China is much larger, and during the 1930s the U.S. population was only 150 million, compared with 1.3 billion in China today. Whereas the U.S. migration was measured in the millions, China's may measure in the tens of millions. As a U.S. embassy report notes,

＊ PRIMAFF Councilor（As of November 30, 2003）.

“unfortunately China’s twenty-first century ‘Okies’ have no California to escape to, at least not in China.”

The ecological deficits like advancing deserts, eroding soils, and falling water tables are converging in the farm sector, creating a food bubble economy. No one knows when the growth in food production will fall behind that of demand, driving up prices, but it may be closer than we think. Spreading water shortages and crop-withering heat waves might trigger the grain shortages. More than 100 countries import part of the wheat they consume. Some 40 countries import rice. While some countries are only marginally dependent on imports, others could not survive without them. Japan, South Korea and Taiwan rely on imports for 70 percent or more of their grain supply. For Iran and Egypt it is 40 percent. For Israel and Yemen, it is over 90 percent. Just six countries, the United States, Canada, France, Australia, Argentina, and Thailand supply 90 percent of grain exports. The United States alone controls close to half of world grain exports, a larger share than Saudi Arabia does of oil.

The food-importing countries referred to above are small and middle-sized ones. But now China, the world’s most populous country, is likely to soon turn to world markets. When the former Soviet Union unexpectedly turned to the world market in 1972 for roughly a tenth of its grain supply, following a weather-reduced harvest, world prices climbed from $1.90 to $4.89 a bushel. Bread prices soon rose too.

If China depletes its grain reserves and turns to the grain market to cover its shortfall, now 40 million tons per year, it could destabilize world grain markets overnight.

Bubble economies tend to burst, as the United States and Japan can attest with their respective stock and real estate bubbles. However, we now face a global bubble economy, created from the overconsumption of the earth’s natural resources. A recent study concluded that humanity’s collective demands first surpassed the earth’s regenerative capacity around 1980. By 1999, our demands exceeded capacity by 20 percent.

The sector of the economy likely to burst first is food. Eroding soils, deteriorating rangelands, falling water tables, collapsing fisheries, and rising temperatures are converging to make it more difficult to expand food production fast enough to keep up with demand.

If the food bubble bursts, it could create an unprecedented worldwide rise in food prices that could be life threatening for many. Our generation is responsible for deflating the economic bubble before it bursts. If we continue with business-as-usual, the damage to the economy’s natural support systems will eventually undermine the economy itself.

The good news is that there are solutions to the problems we are facing. We have the tools to restructure the energy economy, to double water productivity, to cut carbon emissions, and more. The bad news is that if we continue to rely on timid, incremental responses, our bubble economy will keep growing until eventually it bursts. The challenge for our generation is to prevent that from happening.