

## Water Pollution and Waste Management in China

© November 8, 2012

By La'Starshia "Star" Davis

Reprinted 2013

By *Aquosus Potentia*

[www.aquopotent.net](http://www.aquopotent.net)

China is a very up-to-date country. According to *GlobalSherpa.org*, “China has influenced the course of international development for thousands of years” (“China-country Profile, Facts, News, and Original Articles,” n.d.). China has so much to offer not only to its own citizens, but others as well. China’s economy was growing so quickly that the country overtook Japan in 2010. After overtaking Japan, China became the second largest economy next to the United States of America. Although this country is so successful in their growing economy, there are still some major issues that need to be handled. There are serious issues with their waste management as well as their water supply. China’s population could be the key source to their difficult environmental challenges. Being able to control their country’s population’s waste management and water supply will provide for better environmental living.

Waste management is the “the processes involved in dealing with the waste of humans and organisms, including minimization, handling, processing, storage, recycling, transport, and final disposal” (“Waste Management,” 2012). It is very important for a country to have strict waste management standards. In order to keep down disease and other unwanted problems, there must be some regulations. “In 2004 China surpassed the United States as the world’s largest waste generator, and by 2030 China’s annual solid waste quantities will increase by another 150% - growing from about 190,000,000 tons in 2004 to over 480,000,000 tons in 2030” (Delvoie, 2005).

*Table1: Projected Municipal Waste Generation for the Urban Population in China*

Year	Projected Urban Population (thousands) <sup>1</sup>	Low Waste Generation MSW		Expected Waste Generation MSW		High Waste Generation MSW	
		Rate (kg/p/day)	Generation (tonnes)	Rate (kg/p/day)	Generation (tonnes)	Rate (kg/p/day)	Generation (tonnes)
2000	456,340	0.90	149,907,690	0.90	149,907,690	0.90	149,907,690
2005	535,958	0.95	185,843,437	1.00	195,624,670	1.10	215,187,137
2010	617,348	1.00	225,332,020	1.10	247,865,222	1.30	292,931,626
2015	698,077	1.05	267,538,101	1.20	305,757,726	1.50	382,197,158
2020	771,861	1.10	309,902,192	1.30	366,248,045	1.60	450,766,824
2025	834,295	1.15	350,195,326	1.40	426,324,745	1.70	517,680,048
2030	883,421	1.20	386,938,398	1.50	483,672,998	1.80	580,407,597

([http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=4&ved=0CFIQFjAD&url=http%3A%2F%2Fwww.personal.ceu.hu%2Fstudents%2F06%2FLin\\_Jiaqiao%2FAssignments%2FMunicipal%2520Solid%2520Waste%2520Management%2520in%2520China.doc&ei=UOWcUO6uEY2c9QS69IG4Bw&usq=AFQjCNEto9-13ey9S2U\\_fGfOwSwGQ7meow](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=4&ved=0CFIQFjAD&url=http%3A%2F%2Fwww.personal.ceu.hu%2Fstudents%2F06%2FLin_Jiaqiao%2FAssignments%2FMunicipal%2520Solid%2520Waste%2520Management%2520in%2520China.doc&ei=UOWcUO6uEY2c9QS69IG4Bw&usq=AFQjCNEto9-13ey9S2U_fGfOwSwGQ7meow))

According to the chart from above, China's population is going to steadily increase. There are a little over 80,000 increases in China's projected average urban population in low generation, every five years. There is also a five kg/p/day and over 42,000,000 tonnes increase of the MSW (municipal solid waste) generation. There is a major increase every five years for the low, expected, and high waste generation ("China-country profile, facts, news, and original articles," n.d.). If there are no waste management solutions soon, things are only going to get worse. Waste management is very beneficial to the environment and the health of the people. Improper waste management can lead to possible disease spreading. The leading spreaders are animals and insects. When waste has no home, it generally attracts pests and vermin. Those same pests and vermin will usually take diseases into the communities. When an insect or

animal bites a human, makes “waste,” or drinks/swims in the environmental water, it is more than likely a human being will become infected with whatever disease it is currently hosting. Waste management that is not carefully handled leads to a water problem.

Water pollution is China’s second, but most important, problem it’s facing. The country has a low water supply to begin with, but the little water they do have is being unevenly distributed throughout the country. There are numerous amounts of industrial dumping into their water supply, which is a part of the water contamination. According to *drinking-water.org*, there is “Perhaps half of all Chinese—a staggering 600 million people—drink water that is contaminated by human or animal waste. These people are subjected to waterborne disease and a myriad of human health concerns related to the use of polluted water” (“Pollution in China,” 2008). There are well over 30 different waterborne diseases. Some of the most common diseases are

Cholera- an acute infection of the intestines

Diarrhea- frequent discharge of watery feces

Hepatitis- inflammation of the liver

Malaria- parasitic disease

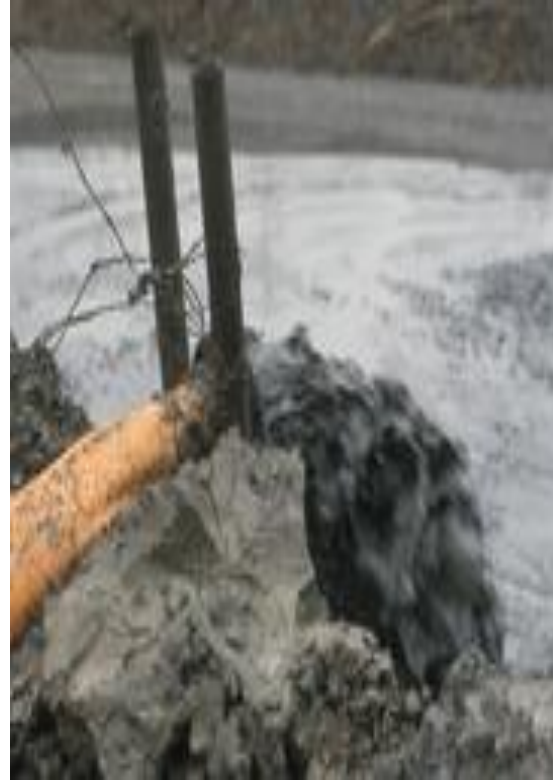
Polio- affects the muscle and nerve cells

Ring worm- superficial eruption of the skin

Typhoid- an acute infection (“Waterborne Diseases,” 2011)

“China produces over 3.5 million tons of sewage waste per day. To treat just half that amount, they would need to invest in 10,000 treatment facilities” (“Pollution in China,” 2008). There are several ways China can start by helping its waste management and water supply. Putting strict

regulations on their manufacturing companies should be the first step. If the first step doesn't work, China should then stop the manufacturing companies from being located near bodies of water. The contaminated water may be working for the factories, but they are taking away from other businesses. The Chinese are big on seafood and vegetables, but the polluted water is making it hard for fishermen to fish and for farmers to farm. If the fishermen continue to fish and the farmers continue to farm, that leaves for a ton of food being contaminated. Eating contaminated food will lead to many of China's citizens taking ill and having to decrease the production of their economy. In the picture on the next page on the left-hand side, you can see a fisherman trying to survive by doing his job, but it's very difficult for him because of the factory in the back that is polluting the Yangtze River (<http://www.drinking-water.org/html/en/ImageView/00000234.html>). The picture on the right-hand side on the next page shows a pipe from a company that is discharging oil into river; it is very sad. Look closely; you can see how the company has rigged the pipe to maintain stability as it pumps oil out. (<http://www.drinking-water.org/html/en/ImageView/00000341.html> )



In conclusion, China has a very serious problem with its waste management and water pollution. In order for the country to take control of a very serious matter, the government needs to enforce some regulations. The main problem is that the companies that run the different factories in China are allowed to pollute. Another source of clearing up some of the pollutants is by having regular checks on pipes in the residential areas. According to a World Bank report (2005), China's cities will need to develop an additional 1400 landfills over the next 20 years, which will be an issue for both China and the world. China has so little water that they need to take every precaution to maintain what they have so that it can be healthily consumed.

## References

China-country profile, facts, news, and original articles. (n.d.). *Global Sherpa*. Retrieved from

<http://www.globalsherpa.org/china>

Gleick, P.H. (n.d.). China and water. *World Water*. Retrieved from

<http://www.worldwater.org/data20082009/ch05.pdf>

Pollution in China. (2008). *Safe Drinking Water is Essential*. Retrieved from

<http://www.drinking-water.org/html/en/Treatment/Agricultural-and-Industrial-Pollution-in-China.html>

Waste management. (n.d.). *Dictionary.com's 21st Century Lexicon*.

[http://dictionary.reference.com/browse/waste management](http://dictionary.reference.com/browse/waste%20management)

Waste management in China: Issues and recommendations. (2005). World Bank (WB).

Retrieved from

<http://siteresources.worldbank.org/INTEAPREGTOPURBDEV/Resources/China-Waste-Management1.pdf>

Waterborne diseases. (2011). *Water Treatment Solutions Lenntech*. Retrieved from

<http://www.lenntech.com/library/diseases/diseases/waterborne-diseases.htm>

Why waste management is important. (n.d.). *Queensland Government*. Retrieved from

[http://www.health.qld.gov.au/ehworm/waste\\_management/why\\_management.asp](http://www.health.qld.gov.au/ehworm/waste_management/why_management.asp)

## Images

[http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=4&ved=0CFIQFjAD&url=http%3A%2F%2Fwww.personal.ceu.hu%2Fstudents%2F06%2FLin\\_Jiaqiao%2FAssigments%2FMunicipal%2520Solid%2520Waste%2520Management%2520in%2520China.doc&ei=U0WcUO6uEY2c9QS69IG4Bw&usg=AFQjCNEto9-13ey9S2U\\_fGfOwSwGQ7meow](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=4&ved=0CFIQFjAD&url=http%3A%2F%2Fwww.personal.ceu.hu%2Fstudents%2F06%2FLin_Jiaqiao%2FAssigments%2FMunicipal%2520Solid%2520Waste%2520Management%2520in%2520China.doc&ei=U0WcUO6uEY2c9QS69IG4Bw&usg=AFQjCNEto9-13ey9S2U_fGfOwSwGQ7meow)

<http://www.drinking-water.org/html/en/ImageView/00000341.html>

<http://www.drinking-water.org/html/en/ImageView/00000234.html>