



Unfortunately there are still thousands of households in South Africa making use of unsafe toilets.

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resulting in individual health gains and increased labour productivity (because if people are healthy they tend to be more productive). Toilets are a symbol of better health, higher income, more education, higher social status and a cleaner living environment.

WHOSE IDEA WAS IT ANYWAY?

Humans have been looking for ways to manage their excretions for thousands of years. It is estimated that 4 000 to 5 000 years ago, there were already toilet systems using water in places such as Syria and China. The Greeks possessed toilets and sewerage systems as early as 2 500 BC.

Around a thousand years later, the Romans built the Cloaca Maxima, Ancient Rome's huge drainage system. In addition, the Romans had latrines, the use of which was reserved solely for the rich, who met in these informal settings to discuss and do both their big and small business. At the same time, communities in what is now Pakistan and north-western India had water-cleaning toilets that used flowing water in each house that were linked with drains covered with clay bricks.

Early toilets that used flowing water to remove the waste are also found at Skara Brae in Scotland. Some of the houses there had a drain running directly beneath them, and some of these had a cubicle over the drain.

Whether you call it a water closet, a lavatory or a loo, while we don't always like talking about them we cannot deny the importance of toilets in our lives.

Access to safe sanitation is one of the cornerstones to a healthy life. Toilets are so important to us, in fact, that they even have their own dedicated day. World Toilet Day is celebrated every year on 19 November to raise awareness of the importance of safe sanitation and of the plight of the

2,6 billion people around the world who still lack access to this important human right.

Lack of sanitation facilities forces people to defecate in the open, in rivers or near areas where children play or food is prepared. This increases the risk of transmitting disease. Children are hardest hit by a lack of access to safe toilet facilities. Every year, an estimated 1,5 million children die in Africa under the age of five as a result of diarrhoea – a disease caused by inadequate sanitation and water. This disease kills more young children every year than HIV/AIDS, malaria and measles combined. Studies show that improved sanitation can improve diarrhoea deaths by a third.

Millions of people are also missing school or work because of illness as a result of having no toilet access. For women and young girls it can be dangerous if they have to relieve themselves in community toilets or in the bushes, especially at night.

Sanitation is not only necessary to improve people's health and dignity it is also a good investment. The World Toilet Association reports a strong link between the absence of good sanitation and poverty. The economic growth in Europe and North America went hand in hand with the large-scale introduction of sanitary conditions,



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A urine diversion toilet in a nature reserve in Pretoria.

MULTIMEDIA RESOURCES

- http://www.wateraid.org/documents/splish_splash_flush.pdf (video on the importance of toilets)
- <http://www.time.com/time/health/article/0,8599,1940525,00.html> (article on the history of toilets)
- <http://www.worldtoiletday.org/>
- <http://home.howstuffworks.com/toilet.htm>
- http://www.youtube.com/watch?v=C_PAUUX36IA (video on the history of the toilet)
- <http://www.bbc.co.uk/news/world-asia-20258175#TWEET346927> (BBC report on the world's first toilet theme park)
- http://www.csir.co.za/Built_environment/santechcentre/



Not all toilets are connected to wastewater treatment plants. Here a worker is cleaning an on-site, VIP toilet.

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Sanitation technology got a little lost in the West after the fall of Rome. In Europe during the Middle Ages, they did make use of a garderobe in castles – a protruding room with a tiny opening usually reserved for nobility, from which waste falls into the castle moat. Later this was replaced by a box and a lid.

The modern toilet is said to have been invented by Englishman, Sir John Harrington, in 1596. This new kind of ‘water closet’ comprised a raised cistern with a small pipe down which water ran when released by a valve. Queen Elizabeth I had one installed in one of her palaces. About 200 years later Alexander Cummings developed the S-shaped pipe underneath the basin to keep out smells. The basic design of the toilet has not changed much since then.

Interestingly, toilet paper had been used in early medieval China. Elsewhere people have made use of all sort of materials, from wool and lace to leaves, grass, seashells to plant husks. In Ancient Rome, a sponge on a stick was commonly used, which was placed in a bucket of water after use. Modern toilet paper was invented by Joseph Gayetty in 1857, who sold his medicated paper in packages of flat sheets.

DIFFERENT KINDS OF TOILETS

When we think of a toilet many of us automatically think of a flush toilet. However, there are actually many types of safe sanitation options out there. A visit to the CSIR Sanitation Technology Demonstration Centre in Pretoria is well worth it to see all the options available in South Africa.

The basic-level sanitation technology that is rolled out most often in South Africa is the ventilated improved pit (VIP) toilet, a type of pit latrine that has to adhere to a certain standard.

A sanitation technology that is used quite widely in the Durban area is the urine diversion toilet. Waste is deposited in a chamber and dry material (usually sand or ash) is added after each use. Urine is diverted through a specially adapted pedestal. In South Africa, most of the urine is led to a soak-away pit, but it can be used as fertilizer for home gardens.

Other sanitation options include pour-flush toilets, aquaprivies, conservancy tanks, septic tanks or shallow sewers.

Perhaps it is time we see the porcelain throne for what it is – a truly marvellous thing! □



Public toilets were used by the wealthy to discuss business in Ancient Roman times.

www.wikipedia.org

DID YOU KNOW? SOME TOILET FACTS

- In 2007, the readers of the *British Medical Journal* voted sanitation the greatest medical milestone of the last 150 years.
- In November last year the Korean city of Suwon opened the world's first toilet theme park. The Restroom Cultural Park has a museum displaying toilet engineering from Rome, Europe, and ancient Korea.
- The average person visits the toilet 2 500 times a year (About 6-8 times a day).
- The oldest working toilet that we know of can be seen in Knossos in Greece in a small castle. The flushing toilet is still functioning about 4 000 years after it has been built.
- South Africa has its own sanitation technology demonstration centre, located at the CSIR, in Pretoria, where visitors can see life-sized examples of safe sanitation technologies.
- One in three people in the world do not have access to basic sanitation. The regions with the lowest coverage are sub-Saharan Africa (31%), southern Asia (36%) and Oceania (53%).
- The first house to have a flush toilet in South Africa belonged to Scottish railwayman James Douglas Logan, who installed them in his Matjiesfontein home around 1890.