



'Poo'

By Sourabh Phadke

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Some of us have the luxury of labeling poo related discussions as 'yucky', 'juvenile', 'crass' or even a 'waste' of time..

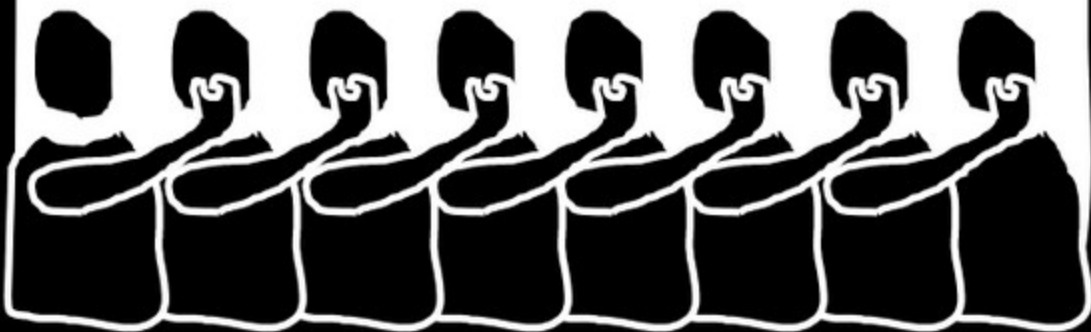
The fact is that there needs to be a discussion on sanitation. One larger than ever before. Because there are billions without access to basic sanitation facilities. And that's no toilet humour..

A note for the 'End' User'-

This material would love to be modified to suit the purpose.

This could be a colouring book, a dossier of stinky bedtime stories, graphic material to conduct discussions on sanitation or even toilet paper if needed (paper cuts alert!).

Do feel free to play around with it.





If you haven't got it yet..



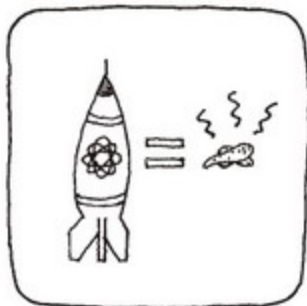
PeePoo we all do..



Yet 2/5 people do not have
access to basic sanitation



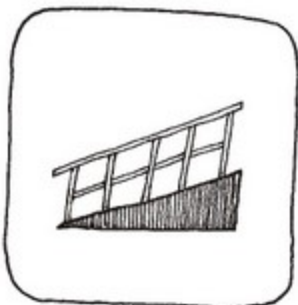
We can contain most
diseases by sanitation



And save more lives than lost
to war!



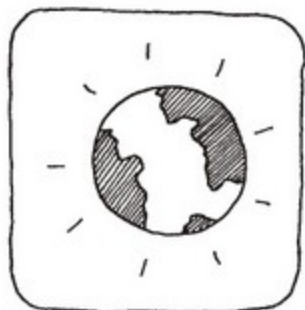
Sanitation promotes
gender equality



And encourages access to
education and livelihoods



Sanitation helps create
wealth..



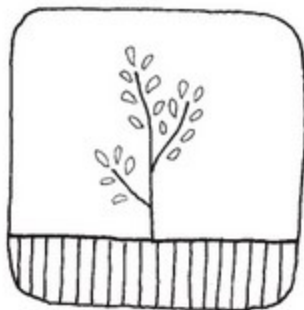
And protects the
environment



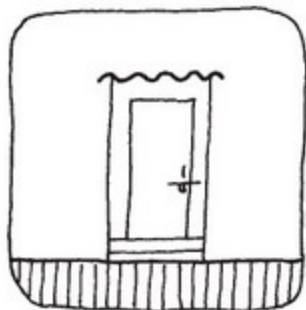
Sanitation is dignity



Sanitation is
convenience



Sanitation returns
nutrients to the cycle



Sanitation is more than
just a toilet!



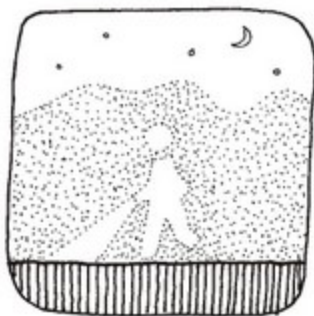
A case against
Open Defecation



O.D. is Odious!!



A brisk morning walk with
fresh air



The brisk walk may be in the
middle of the night too..



Picturesque locations



The picturesque decreases
with every use..



Direct delivery of
fertilisers



There are better and safer
ways of doing so



Socialise with like minded individuals



Everyone needs time for introspection



Get intimate with nature



Err.. Not such a great idea after all



Poo disposed far away from dwellings



The distance is a problem for the vulnerable



Paradigms..



From lines to loops





We are taught to live on a
flat world



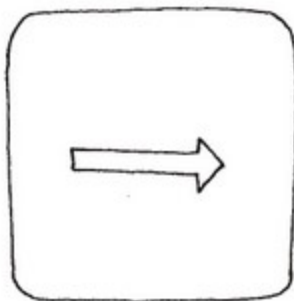
And to pass the buck!



But the real world is round



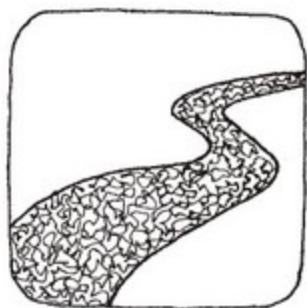
And the buck just came
back!



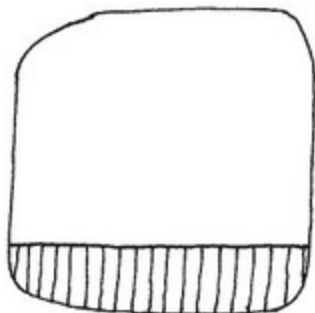
Linear solutions will simply
not suffice



We must learn to close
the loop



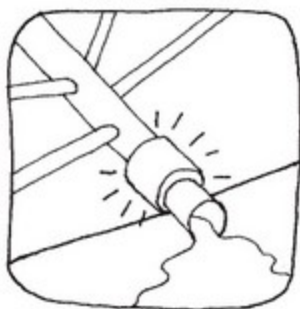
Our rivers bloom due to
dumped nutrients



While our lands die due to lack
of the same!



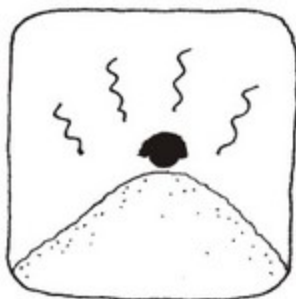
a global food crisis looms



We spends billions on end-of-the-
pipe solutions



But wont mend our
wasteful ways



No wonder we are in deep shit!

STEP I

GROW / BUY
FOOD

STEP II

COOK IT!

STEP III

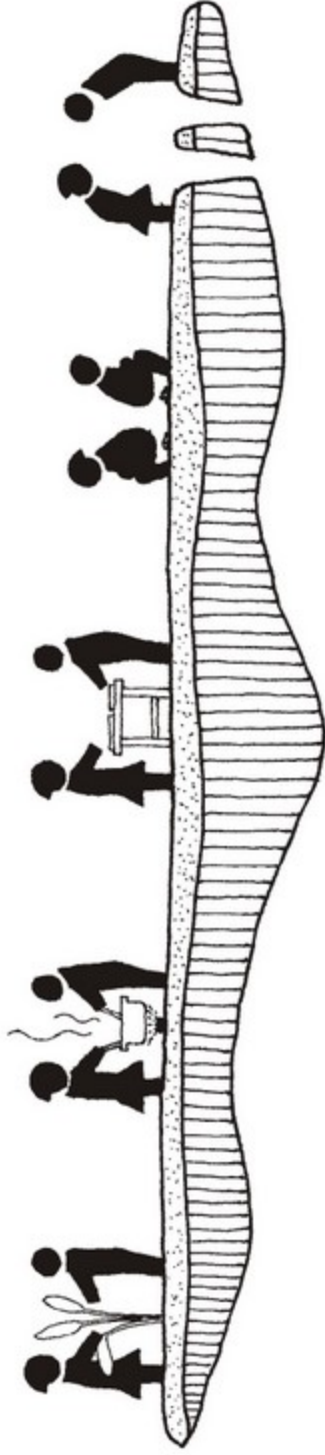
JUST
EAT IT!

STEP IV

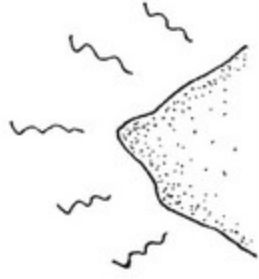
TAKE A
CRAP

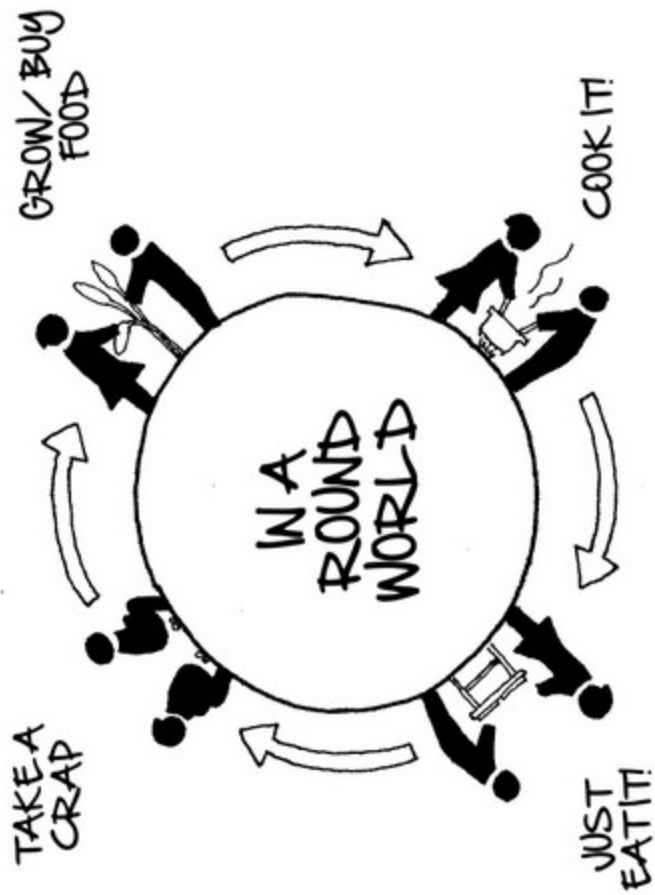
STEP V

FLUSH DOWN
MAGIC HOLE!



LIFE ON A FLAT WORLD...





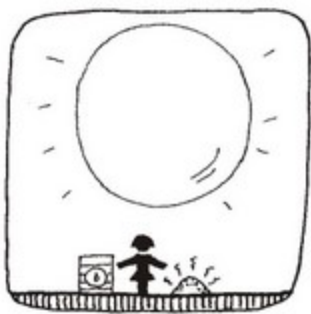
And can you guess where exactly does sanitation's role lie in this loop?

Answer: Everywhere!!





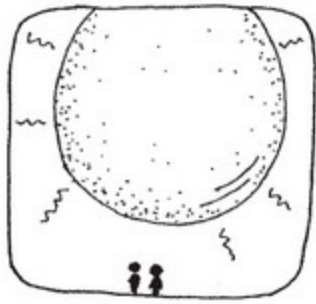
Each of us produces 50 L poo
and 500 L pee every year!



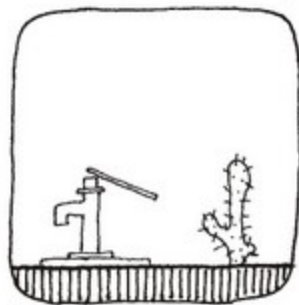
But uses 15000 L of pure
water to flush it away!



Along with an equal amount
of water for washing etc.



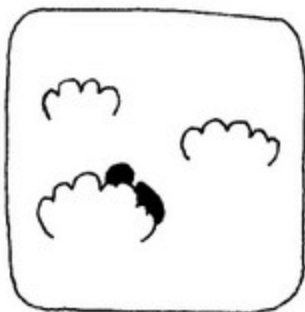
So we end up polluting incredible
amounts of water!!



When people are dying
due to lack of clean
water



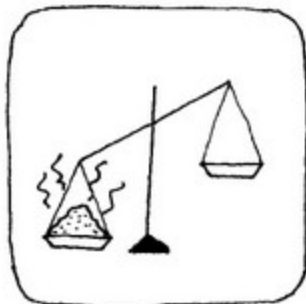
Isn't it time we all came
together to act?



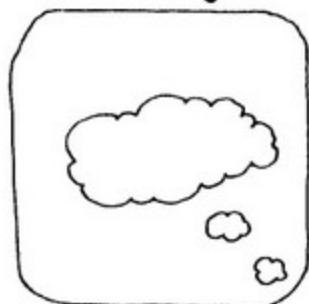
On one hand we face a resource crunch..



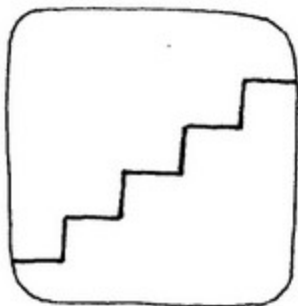
On the other, people consume more than they should



There's absolutely no balance



We need to rethink our ways. Fast!



Some need to step down so that others can step up



Reflect on this the next time you flush..





One of lifes greatest joys:
to Pee!



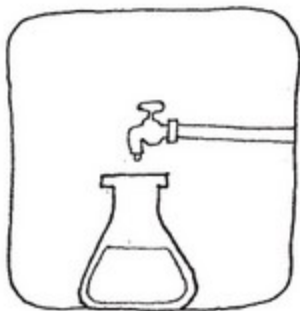
We pee more than a
litre everyday!



Pee is a complex concoction



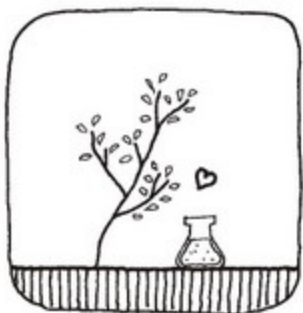
Usually sterile, harmless!



It is mostly water



But contains a host of
other chemicals!



Pee is an excellent fertiliser



Which has to be diluted before application



Who needs those chemical fertilisers anyways?



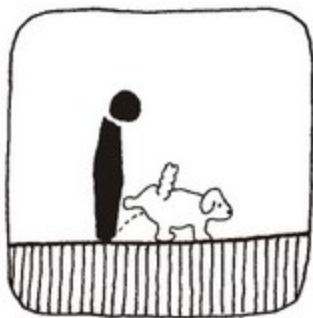
With regular use of pee,



We can get fantastic results!!



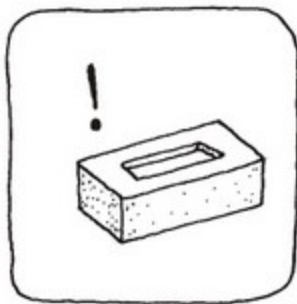
Pee is versatile..



Animals use pee to mark territories



Hunters use pee salts to attract animals!



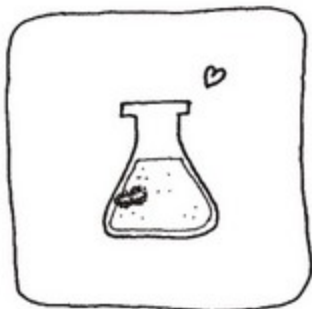
Adding pee to mud helps build stronger walls!



Some people drink their own pee for health



Its first aid for wounds too



Life is truly Peentiful!



Adult pee has more nutrients than child pee



A healthy persons pee will contain no scary pathogens



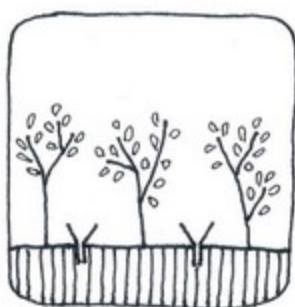
But just to be extra careful..



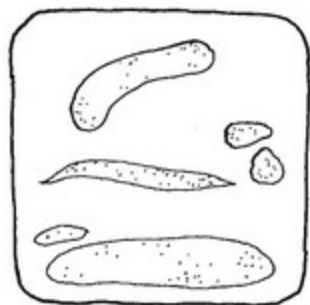
We can store the pee for a few months



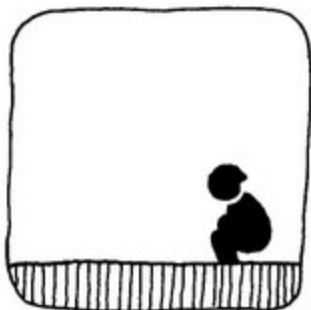
And ta-daa! Its completely safe for use!



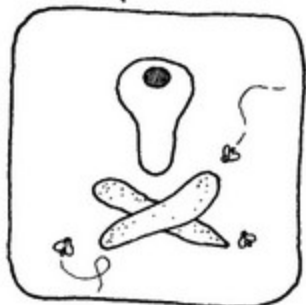
It can now be applied for all crops



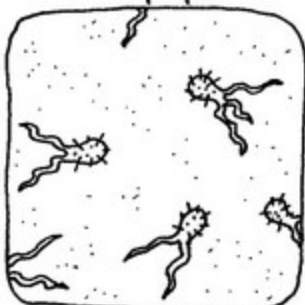
Poo comes in a variety of shapes and sizes!



Come rain, come shine, we all poop..



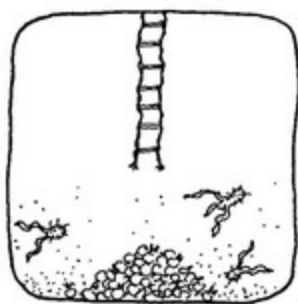
But poo is the one to be wary of. Its Dangerous!



Since its full of scary pathogens



But it contains precious nutrients too.



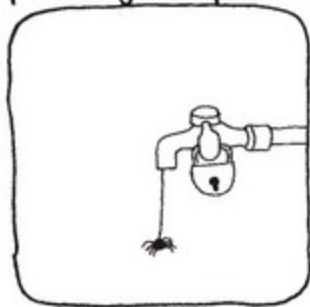
To rescue those nutrients, we need to sanitise poo



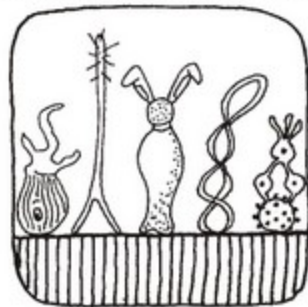
We can do so by exposing
poo to high temperatures



or to Ultraviolet
radiation from the sun



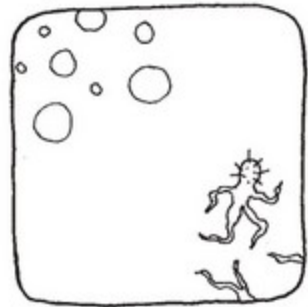
Keeping it dry also helps



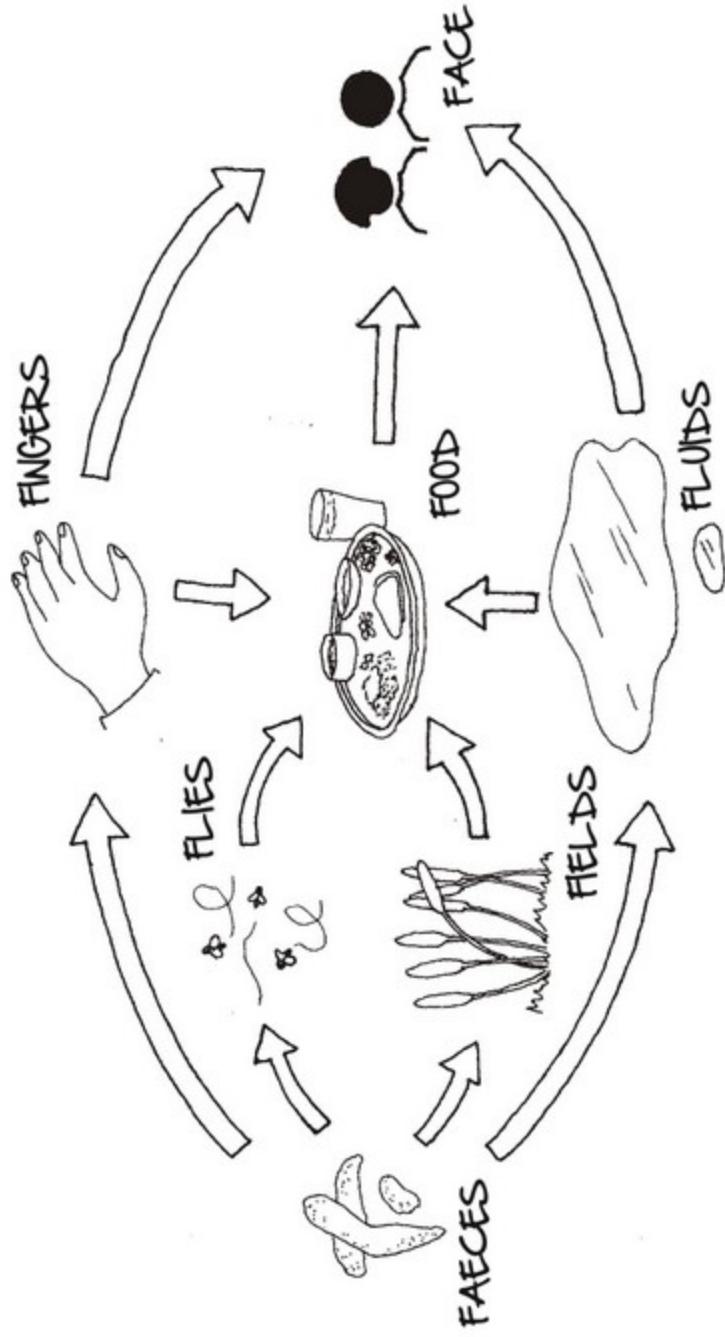
Introduce microorganisms to
compete with the pathogens



Many pathogens also find
air unsuitable for living



Increasing alkalinity
also helps drive them
away!



The 'F' Diagram: The routes pathogens take to reach us



A toilet is not enough to
ensure health



Our behaviour should be
hygienic



We must wash our hands
with soap and water



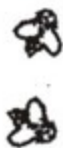
After we poo poo



And before cooking
or eating



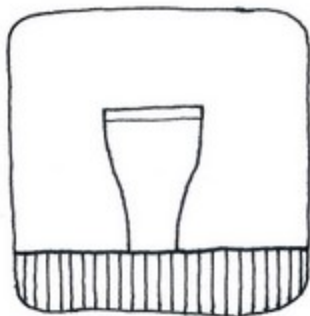
We can reduce chances of
disease drastically!



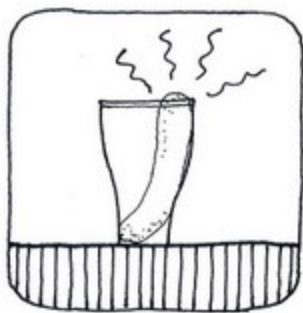
Technology & Miracles



Why not mend ways
instead?



Lets fill a glass with pure,
cool water. Nice!



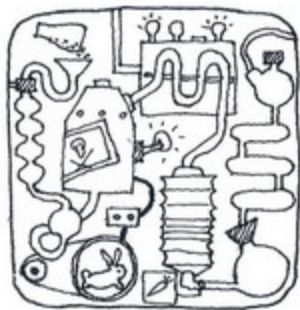
Now add a scoop of poop



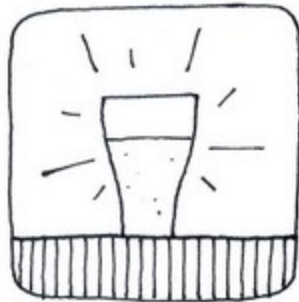
Stir gently. Do not spill!



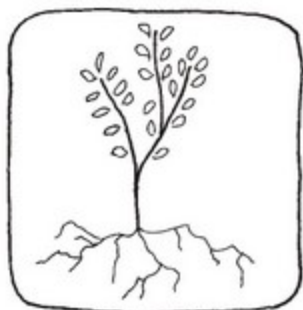
Hmm..



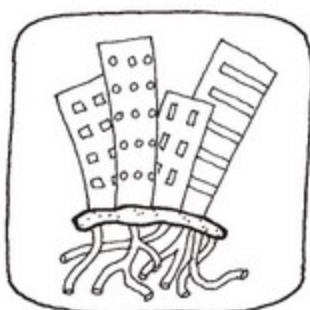
Tan taran ta raa!
Technology comes to the
rescue!!



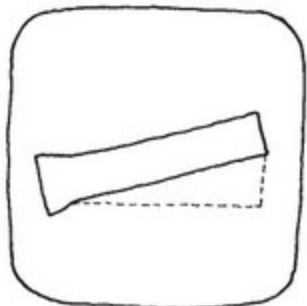
We now have a glass
nearly full of nearly pure
water! Yay..



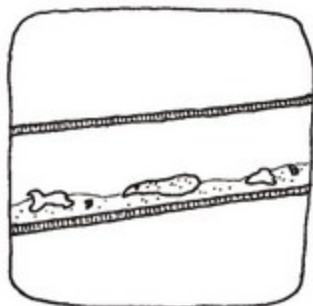
Plant-roots search for
water and nutrients



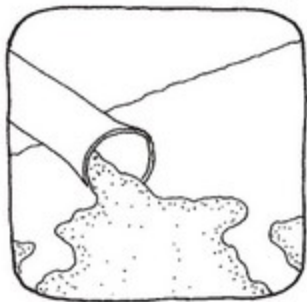
City-roots spew out the same!



A sophisticated
network of sloping pipes



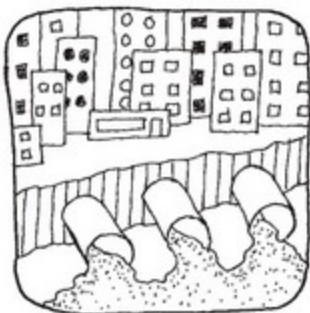
So that our poo slides, and
doesn't stick



All the way down to the
river or ocean



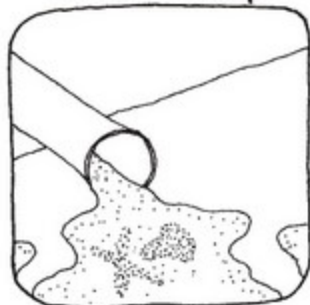
NIMBY as can be eh?



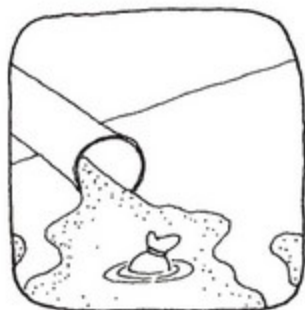
Imagine the amount of
waste we dump



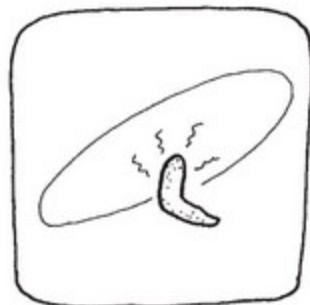
All around the world



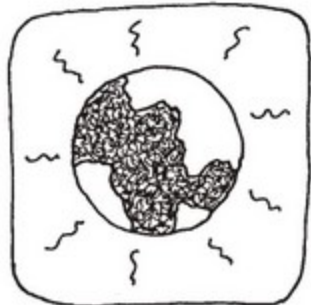
We throw out toxic
chemicals



And precious nutrients
& resources too!



But what goes around
comes around..



Need I say more..



First Process.
Then Product.

Soak Pit



All of us have seen a sieve



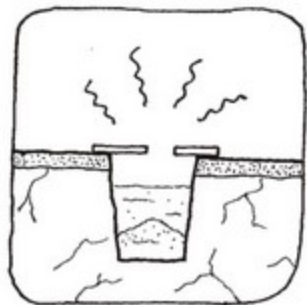
A soak pit is where the ground acts like a sieve



poo collects in the pit and must be removed



Hence its more convenient to have an alternate pit



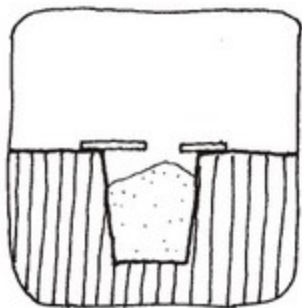
Soak pits don't work with hard, rocky ground



And shouldn't be used in high groundwater areas



Soak pits can also be abandoned when full



So when the first pit is full of poo,



Simply dig one close by



And plant a tree in the first!

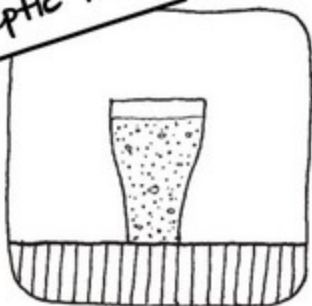


Now the second pit can be used regularly

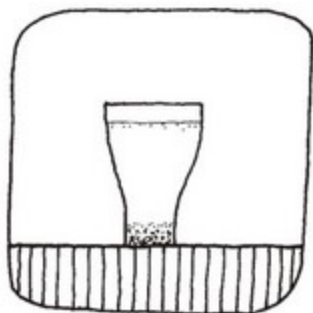


So while you poo, fruits grow beautifully in front of you!

Septic Tank



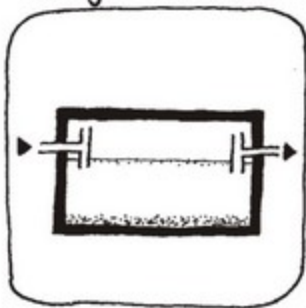
Place a glass of muddy water on a table



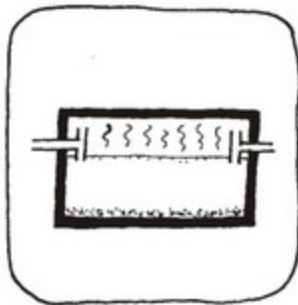
The heavy mud settles, while the light stuff floats.



Imagine taking out the clearer middle portion



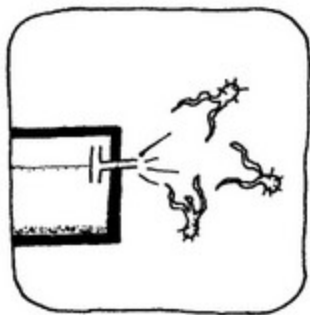
That's pretty much how a septic tank works!



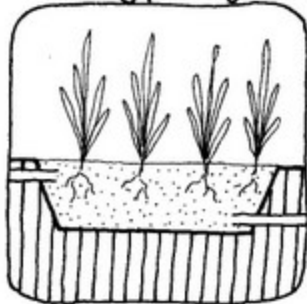
Inside it, bacteria digest the poo in airless conditions



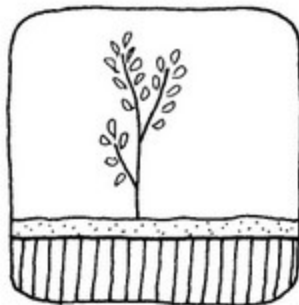
The middle portion is percolated into the ground



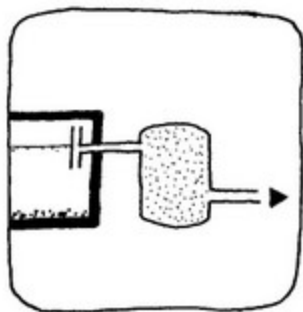
But even this is full of scary pathogens!



Like a constructed wetland or a filter



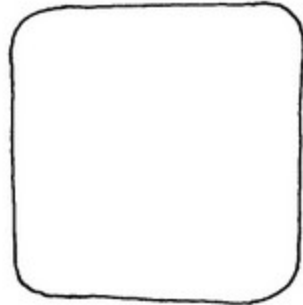
This is a good fertiliser when sanitised!



And must be provided secondary treatment



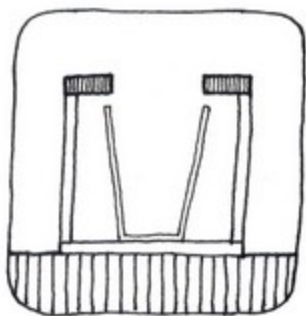
The sludge in the tank must be removed periodically



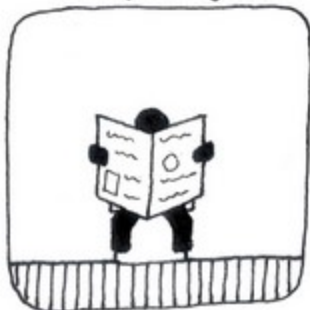
Space deliberately left empty for contemplation..



Anyone can build their own composting toilet



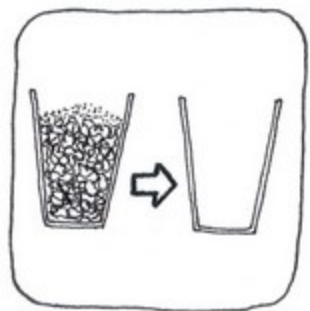
Its just a box with a hole, and a bucket



We can sit or squat over it



Throw in a handful of cover material when done



Once a bucket is full, simply replace it with an empty one!



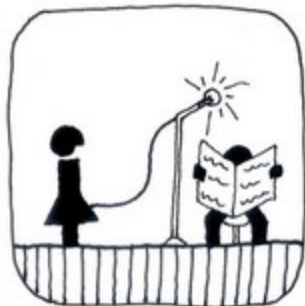
Empty the first in a composting heap. This does not stink!



Its fun to whizzpop loudly
when theres noise around



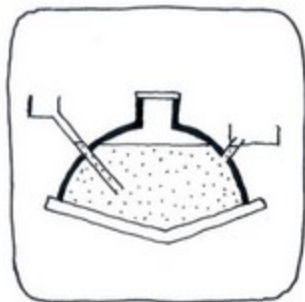
Its the silent ones that are
deadly!



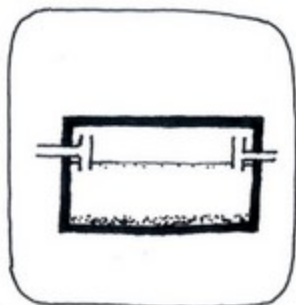
How about using our own
gases for some good?



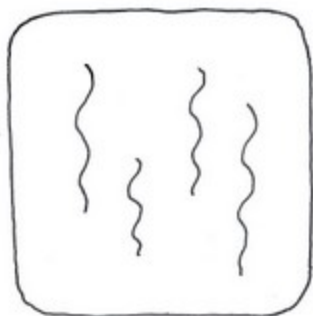
Some bacteria digest poo in airless
conditions and produce gas!



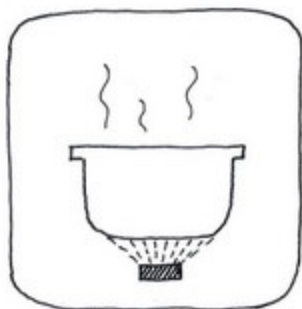
Like in a biogas plant



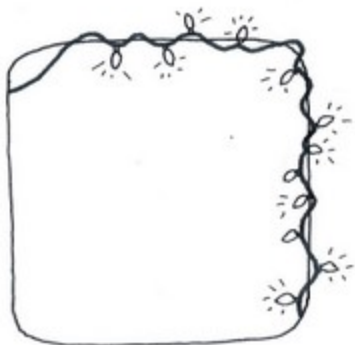
Which is very much like a septic
tank



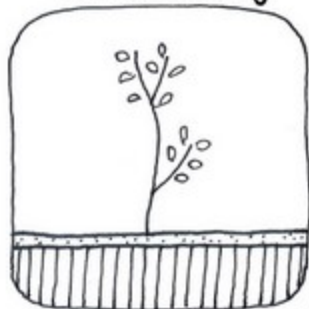
The bacteria produce gas



Which can be piped to
fuel our cooking!



Or even light the place up!



The biogas plant sludge is a
fertiliser too!

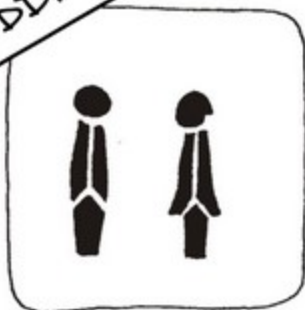


Now thats a real win-win
situation



yay!!

UDDT



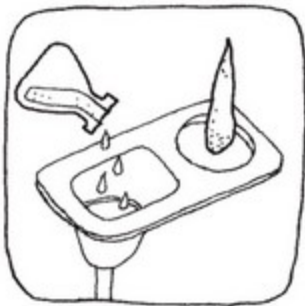
Mummy nature has given us separate pipes



With good reason too: Pee is safe. Poo isn't!



So why mix it up in the toilet?



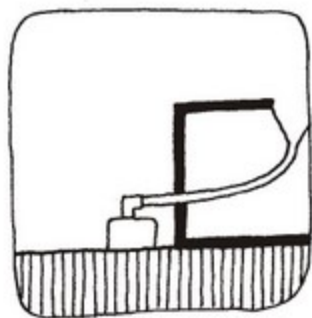
Keep things simple and separate!



We sit/squat as usual.
The pan separates!



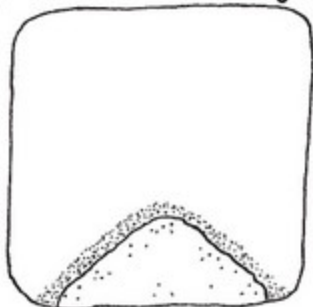
Satisfied, we throw in a handful of cover material



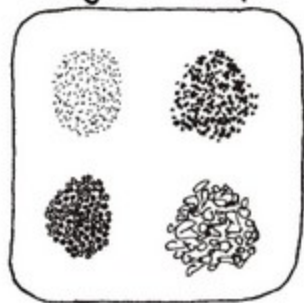
The pee is collected or percolated into the ground



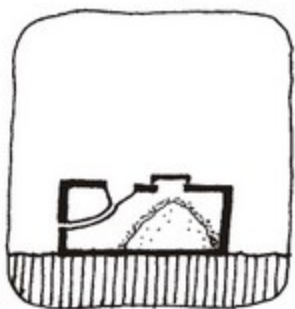
And we can wash/wipe away from the poo



The cover material avoids odours and helps dry the poo



Ash, dry leaves, mud, husk are all good cover materials



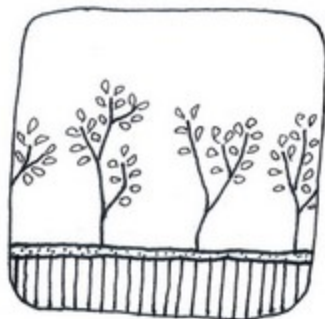
When the tank is full, the poo is isolated for a year



After which it is safe to be removed manually



It doesn't stink one bit,
and doesn't look gross!



We can compost the same and
apply on the fields!



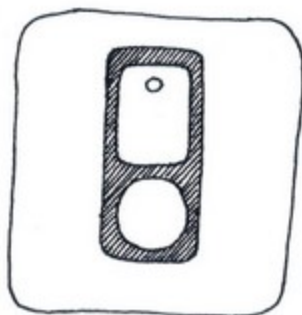
Such a toilet also saves
oodles of water!



And can be built even in rocky
areas



Since it isolates the
poo, it's ideal for flood
prone areas



It is called a Urine Diversion
Dehydration Toilet. A UDDH!



soar.hub@gmail.com



It's over
guys, you
can breath
now!!

