

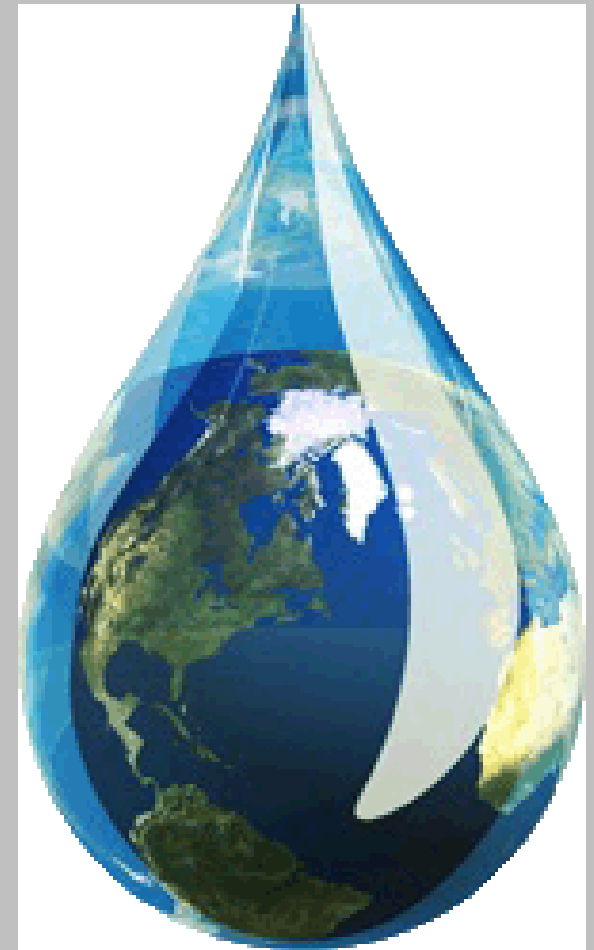
HATI consult

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TerraPreta

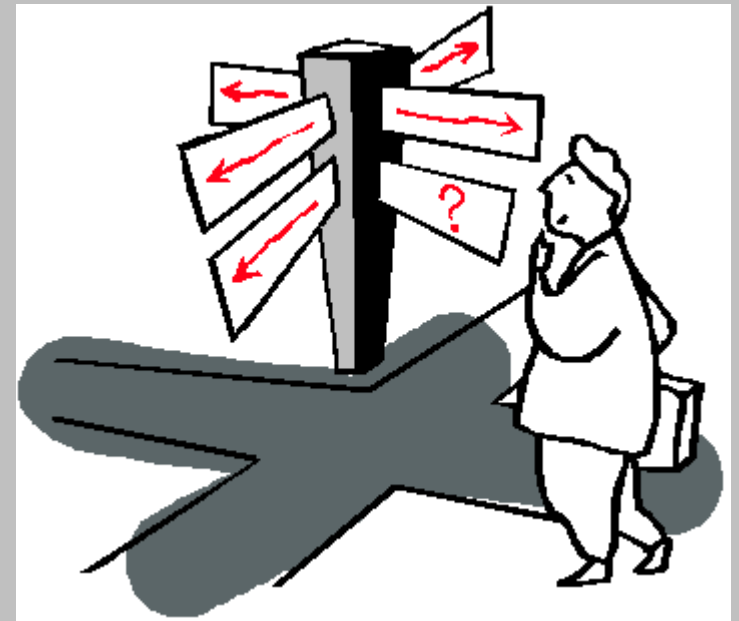
Sanitation

in Germany



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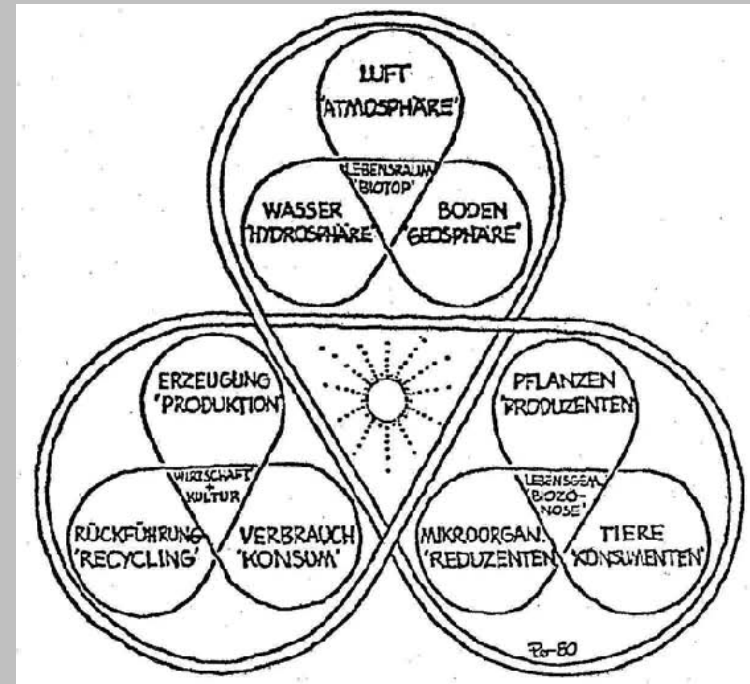


Introduction

Already in the 70th the german author Peer Krusche has composed decentral linked concepts for closed loops.

TerraPreta sanitation concepts are able to close loops.

On the following pages we will show some projects with first entries in Germany.



Source: „Ökologisches Bauen“, Wiesbaden/Berlin, 1982



Botanic garden Berlin1/5

The Terra BoGa project was initiated from Dr. Pieplow and Prof. Terytze. It is sponsored with european money for the reduction of CO2 emission.

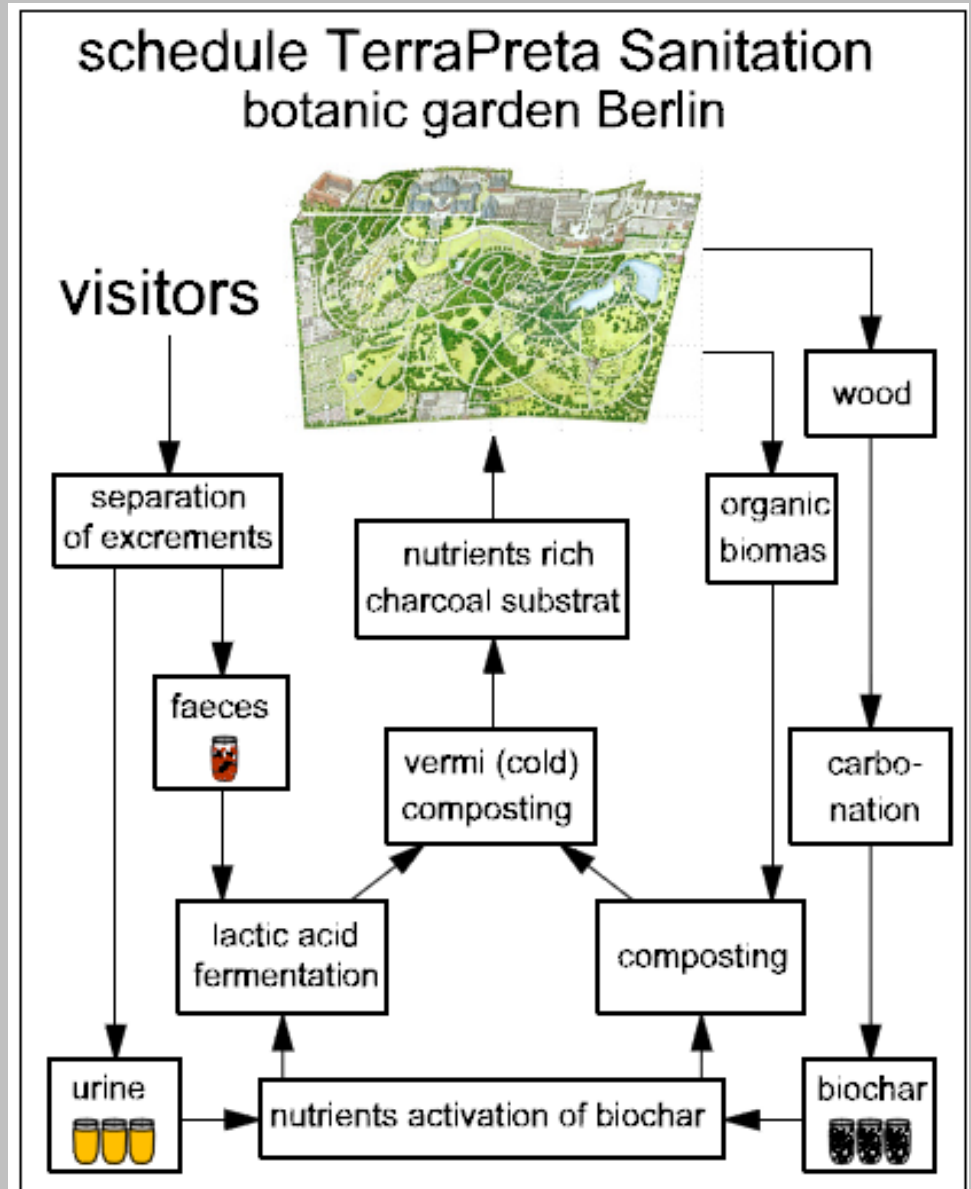
- close the loop of the organic material
- TerraPreta production and research
- sustainable sanitary installations
- production of biochar



Photo: Bernd Genath



Overview 2/5 of the processes



Sustainable sanitary installations 3/5 separation of the faeces

The solid material - faeces and toilet paper - is separated by a spiral conveyor from the black water stream and transported to a storage tank.

1. Black water inflow
2. Separator
3. Barrel for solid material (bio-Char, faeces, toilet paper)
4. Outlet of the liquid phase



Source: TECE



Sustainable sanitary installations 4/5 collection of the urine

**The human urine contents about
60 % of the phosphorus and
80 % of nitrogen.**

**The separation of the urine with
waterless urinales could be realized
in a public toilet of the botanic
garden.**



Photo: Bernd Genath



Carbonization of the wood 5/5

The TerraPreta needs existentially the additive biochar.

The installed carbonizer of the BioMaCon company could pyrolise all the woodcut (40kg/h) of the botanic garden and change into biochar (13kg/h).

The heat will be used in a building near by.



photo: BioMaCon



Public toilet mainstation Hamburg

This project was initiated from the State Ministry for Urban Development and the Environment by Mr. Grönwall. The TerraPreta concept is lately extended by an innovative recycling system for toilet flush water in collaboration with Intaqua AG.

The project is scientifically accompanied by TUHH (Hamburg University of Technology, Prof. Otterpohl , T. Bettendorf)



Photo: Bernd Genath



Tropical greenhouse

Tropenhaus am Rennsteig

The project was initiated from the idea, to find an effective use of the low-ex energy, which is coming out at the glass factory “Heinz Glas” in Klein-Tettau.

- heated greenhouse and biological production of fruits**
- aquaculture**
- restaurant**
- production of TerraPreta and fertilization of the plants**



photo: Klein-Eden



Scandic hotel Berlin

This hotel is certified with the special nordic and the european eco label.

There are concrete thoughts to implement:

- separation of solids from the total sewer of the hotel and TerraPreta production
- heat recovery from the sewer



photo: Scandic



Thanks for your attention

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