Zero-discharge recycling systems

- Definition:

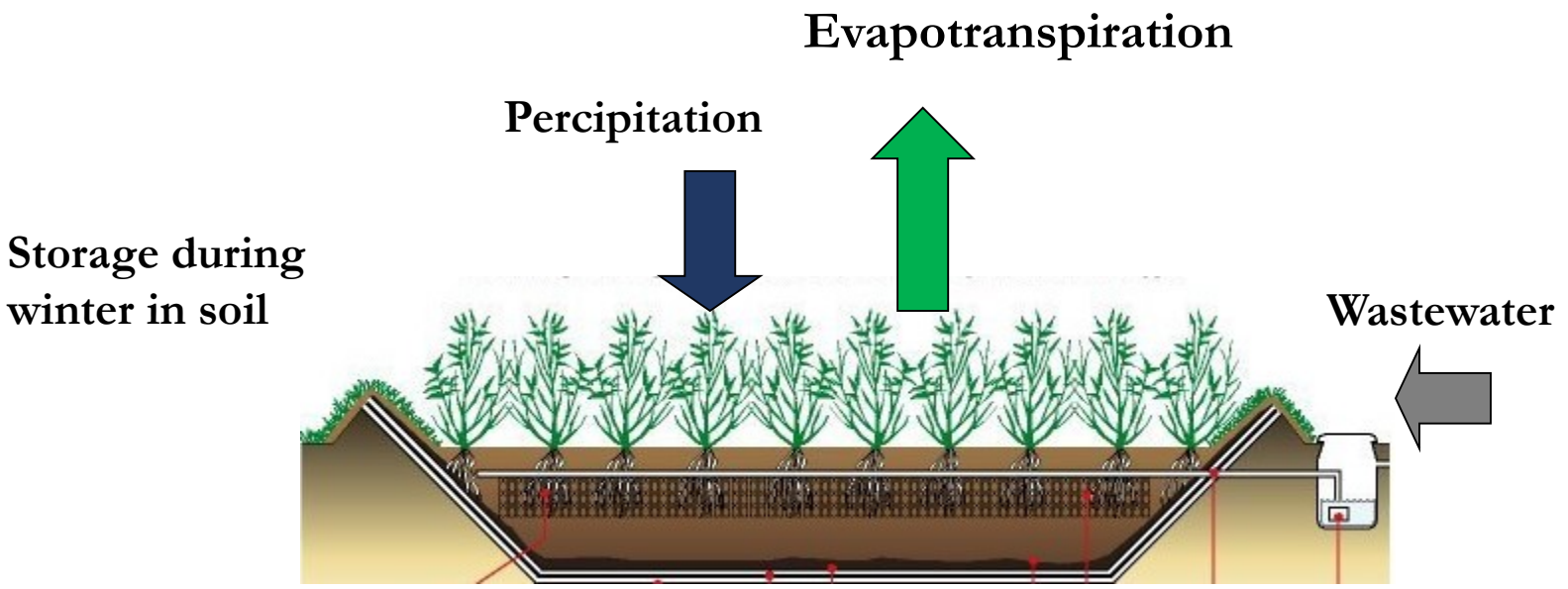
A system purification system without outlet to water environment for:

- household wastewater,
- proceswater,
- stormwater
- any other water with nutrients and sludge also from above mentioned.

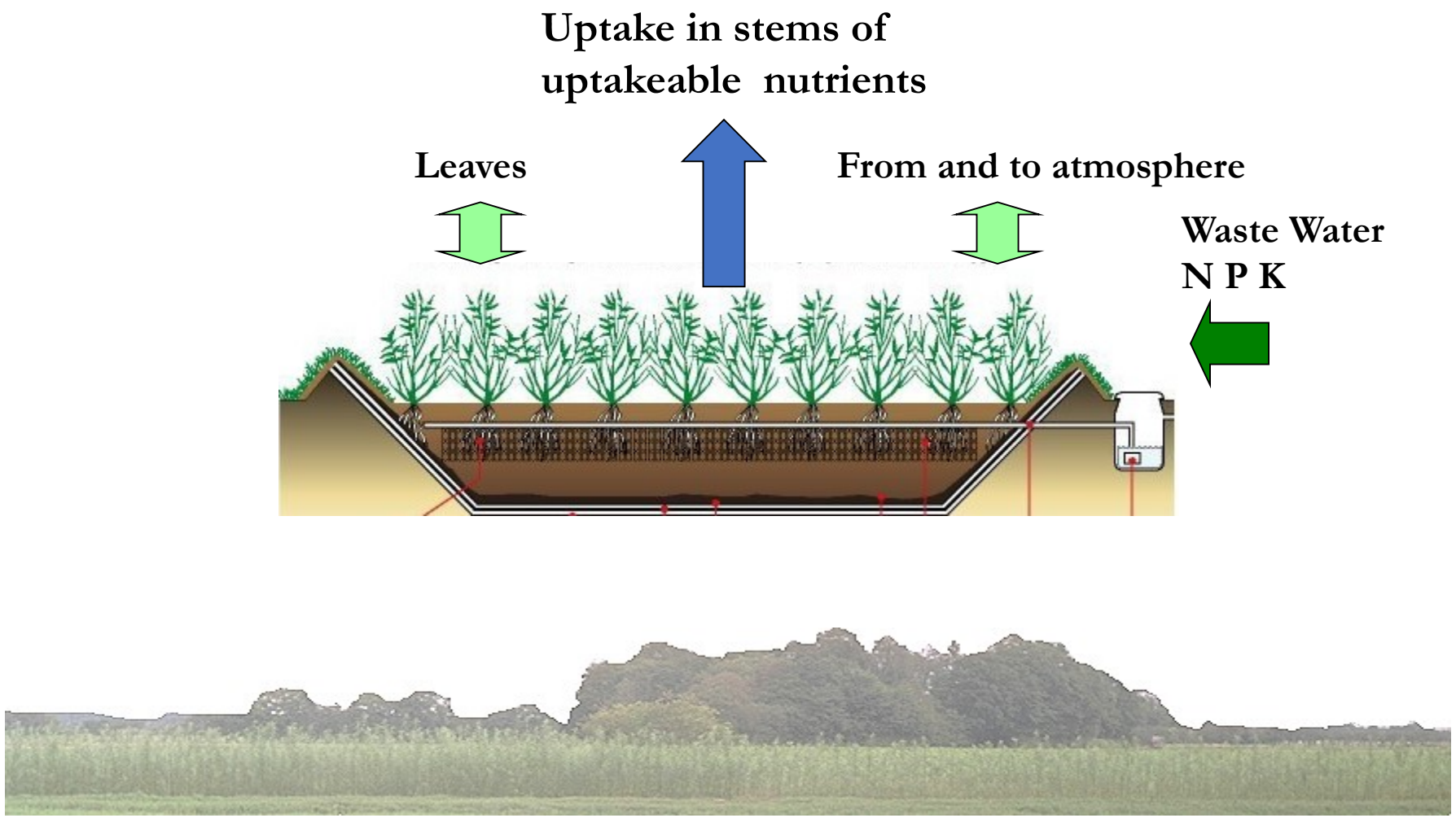
which can be used for growth in trees as a source of biomass. Biomass from the system can be recycled as:

- soil conditioner and nutrients for farmland binding carbon for several years
- biomass for heating and ashes as nutrients
- in a double circle system

Zero-discharge recycling systems

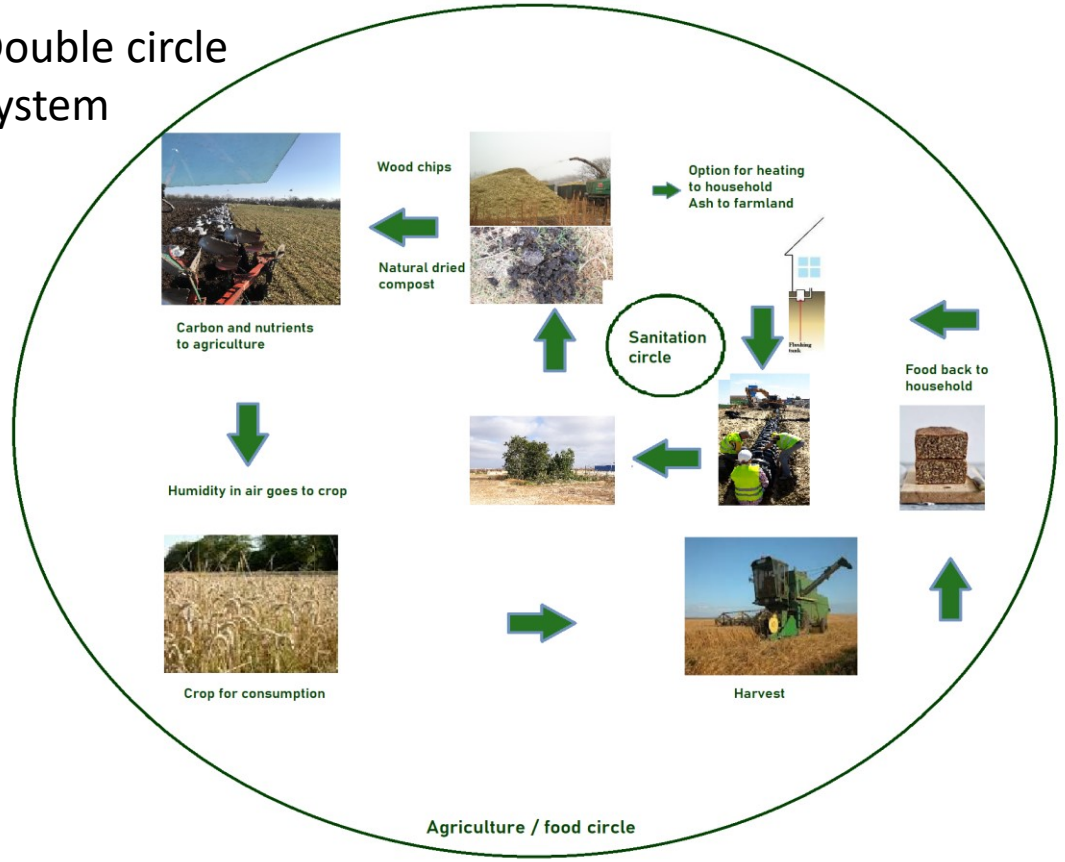


Zero-discharge recycling systems



Zero-discharge recycling systems

Double circle system



Zero-discharge recycling systems

Eucalyptus used in desert like subtropical area

Biomass produced is 71 t DM/ ha/year
Content recyclable nutrients extracted is:
P : 50 kg ha/ year
K : 380kg ha/ year
Hardly any content of heavy metals from household wastewater digestate

Sludge with DM > 30%: 100.8 t /ha/ year
Content recyclable:
C :27400 kg/ ha/ year
P: 4740 kg/ ha/ year
K: 510 kg/ ha/ year
Low content of heavy metals from household waste water digestate

Zero-discharge recycling systems

Center for Recirkulering

Special benefits.

- The system can be used for fighting desertification, because it bring organic matters to soil, which makes the soil contain water for a much longer period.
- Evaporated water from facilities will make sourroundings more humid
- Evapotranspiration makes the areas around colder
- The biomass from trees is used for soil conditioner and fertilization of further area
- The biomass from sludge is used for soil conditioner and fertilization as well
- The assimilation in trees convert CO2 from atmosphere to O2 and to biomass
- The areas with trees makes biodiversity
- The systems reduce wind speed
- It is the start of new forrest agriculture
- And in addition your water environment will be totally clean for free !

All it takes is sunlight, wastewater, some area (often wasted land) and a small pump to distribute the wastewater including the sludge