

# Sludge Constructed Wetlands (SCW)



**SCW** are vertical flow constructed wetlands designed to manage activated sludge from conventional wastewater treatment processes or anaerobic sludge from UASB processes. Several beds are needed in parallel in order to ensure feeding and resting periods. The beds are composed of layers of different granulometry, with the middle layer of gravel 2-4 mm and the top layer of sand 0-4 mm. A sludge cake forms on the surface of the bed, allowing the sludge to dry and mineralise. The dried sludge accumulates in the upper layer until its removal after 10-15 years.

## KEY POINTS:

- Nature Based Solution (NbS)
- Total sludge mineralization
- In situ sludge management
- Good quality lixivates
- More than 10 years without sludge transport
- Low maintenance

## MAIN FEATURES

- ✓ High performance even under adverse climatic conditions (winter/frost).
- ✓ No use of chemical reagents for dewatering (polyelectrolytes).
- ✓ Very low energy consumption (pumping only). Possibility of using renewable energies.
- ✓ Aerobic process. Absence of odors.
- ✓ Sludge management every 10-15 years.
- ✓ Good pathogen removal in the sludge.
- ✓ Mineralized sludge with a dryness of 30-40%
- ✓ Final reuse of sludge as agricultural fertilizer
- ✓ Normally more than 4 units in parallel to facilitate resting periods.
- ✓ Footprint: 1,2 m<sup>2</sup>/PE for sludge in excess of prolonged aeration