



PHYCOTECHNOLOGY:

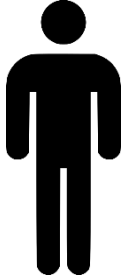
LOW CARBON PROCESS FOR WATER RECYCLING

CLIMATE CHANGE AND WATER FACTS...

More than 2 billion people live in countries experiencing high water stress. The situation will likely worsen as populations and the demand for water grow, and as the effects of climate change intensify. ([United Nations, 2018](#))

Climate change will have its most direct impact on child survival through three direct channels: changing disease environments, greater food insecurity, and threats to water and sanitation. ([UNICEF, 2019](#)).

URBAN WASTEWATER



250 L PER PERSON AND DAY



75 G OF SUSPENDED SOLIDS PER PERSON AND DAY



200 G OF ORGANIC MATTER SOLIDS PER PERSON AND DAY



12,5 G OF NITROGEN PER PERSON AND DAY



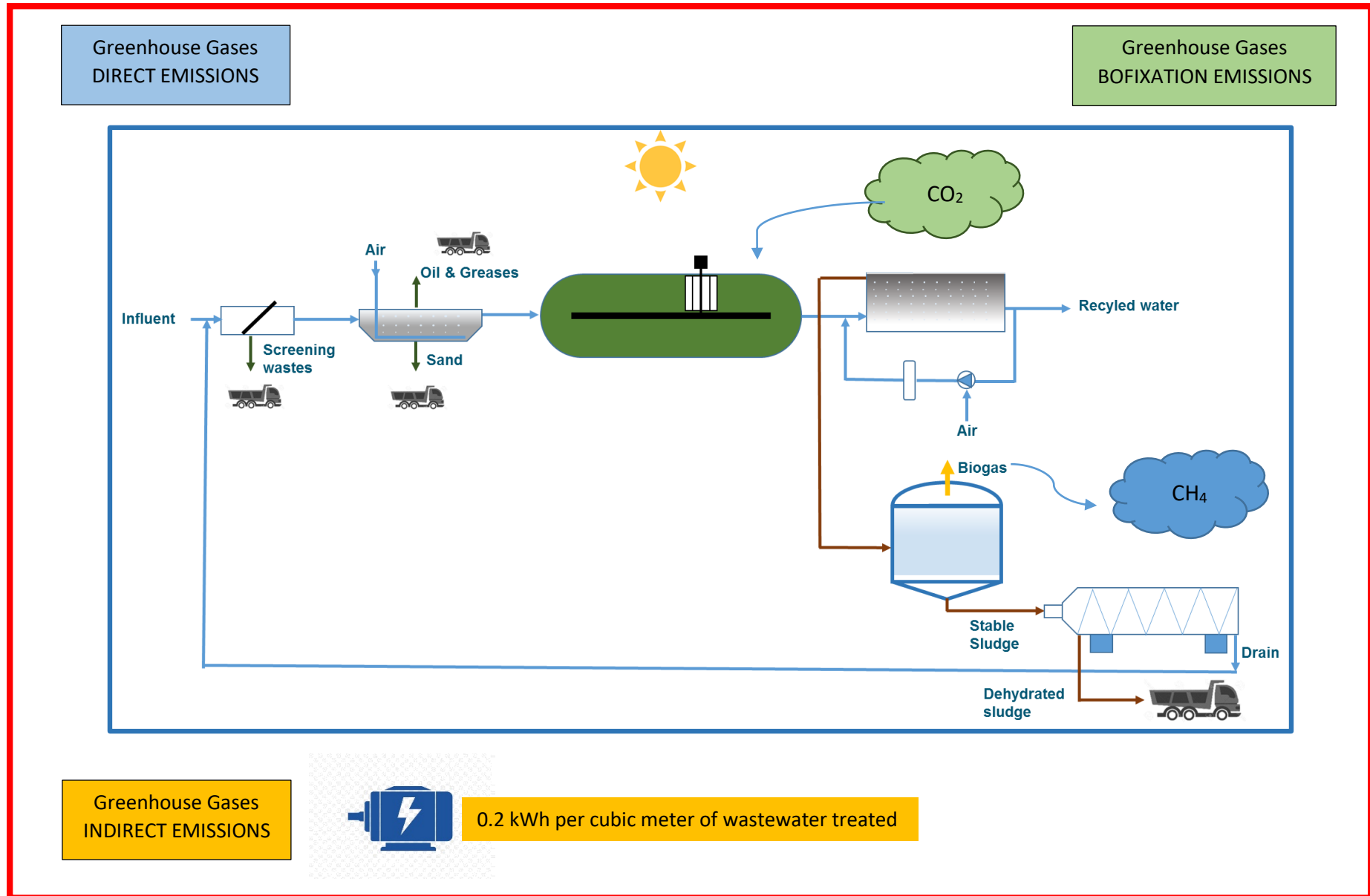
2,5 G OF PHOSPHOROUS PER PERSON AND DAY

PHYCOTECHNOLOGY BASED WASTEWATER TREATMENT

- 50 kg CO₂-equivalent per habitant

15 kg CO₂-equivalent per habitant

* <https://doi.org/10.1016/j.egypro.2016.10.067>



DATAS

Kg CO₂ eq/person/year	Conventional	Ficoremediation
Electricity	5,6	1,4
Chemicals PO ₄ removal	0,9	0
Chemicals sludge dewatering	0,6	0,6
N ₂ O nitrification-denitrification	15,5	0
CH ₄ sludge digestion	9,5	9,5
N ₂ O/CH ₄ water bodies	3,3	3,3
Transport	0,61	0,61
Microalgae biofixation	0	
TOTAL	36,01	15,41

El proceso con microalgas consume alrededor de 4 veces menos electricidad

**(Fuente: Grupo de Ficotecnología Ambiental, Instituto de Investigación Marina, INMAR,
Universidad de Cádiz)**

<http://inmar.uca.es>