

Wastewater reuse in countries with high water stress- challenges and opportunities

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**Type
de Projet**

Interational

Traitement des eaux usées
et valorisation des déchets

**Domaine
de Recherche**

**Appel
d'offre**

Environment, Sustainability,
Nature Conservation, sustainable
use, Water(bodies)

**Mots
Clés**

2020 >>> 2024

Résumé

Activated carbon obtained from different biomass types will be tested for the removal of pharmaceutical compounds from wastewater from decentralized wastewater treatment plant. This work is part of the WP1 from the project "Wastewater reuse in countries with high water stress - challenges and opportunities" lead by University of Umea.

The activated carbon will be produced and characterized at the University of KwaZulu-Natal [Durban, South Africa] and University of Mohammed V [Rabat, Morocco]. After this, the performance of the activated carbon to remove pharmaceutical compounds from wastewater will be evaluated at the University of Umea.

The activated carbon will be produced in two

separate stages: carbonization consisting in the pyrolysis of the biomass feedstock, and the activation of the resulting biochar. The carbon material will be characterized through a variety of analyses and its adsorption abilities will be assessed.

The biomass feedstock used for these experiments consist in: black wattle, eucalyptus and manure for the activated carbon to be produced at the University of KwaZulu-Natal; olive mill waste, argan shells and date palm residue for the activated carbon to be produced at the University of Mohammed V. The type of biomass as feedstock was selected based on their high local availability.

Partenaires

University of Umea, University of KwaZulu-Natal [Durban, South Africa], University of Mohammed V, faculty of science [Rabat, Morocco] and UM6P.