IVA-WASTE (Integrated VAlorization of liquid and solid WASTE)

Integrated management of the valorization of liquid and solid waste - case study of Sousse area, Tunisia

ABSTRACT

We propose to explore plausible new scenarios of waste valorization for agriculture purposes based on a case study in Tunisia. The originality of the proposal, compared to existing investigations on water “reuse”, is to consider both liquid and solid wastes as common sources of nutrients for crops to be refined, and adopt an integrated vision at the scale of a territory (Sousse area) which is famous for olive growing. We aim at collecting relevant data in a first step, in order to compare it with current practices and to propose management scenarios in a second step. Approaches based on modelling, numerical simulations and spatial analysis will be also assessed for the elaboration of decision making tools in future projects. The overall philosophy of the project is to deploy a generic approach to the issue. The potential solutions will be discussed and presented to local stakeholders, specialists and practitioners in a forum. Finally, this project aims to initiate a fruitful collaboration between multidisciplinary partners with the intention to continue beyond this seed project.

Year : 2020
Project number : 2001-027
Type of funding : AAP ABS
Project type : AAP
Research units in the network : MISTEA LBE
Start date : 2021-02-01
End date : 2022-01-31
Flagship project : no

Project leader : Alain RAPAPORT
Project leader's institution : INRA-INRAE
Project leader's RU : MISTEA

Budget allocated : 24700 €
Total budget allocated (including co-financing) : 24700 €
Funding : Labex

GOAL

The overall aim of our initiative is to explore and create the conditions for co-designing scenarios to select and valorize nutrients from various waste flows, within a circular economy. The originality is to integrate both liquid and solid waste, considered as a continuous range of humid to dry waste flows, in a common perspective of valorization of nutrients for agriculture. The objective of this “Type 2” exploratory proposal is to assess the technical potential and synergy of waste flows in a Tunisian nutrient sink of moderate complexity surrounded by a fairly mono-cultural agricultural hinterland: the Governorate of Sousse and its olive growing region. The work will consist of the analysis of existing data and knowledge to be collected for the elaboration of innovative scenarios. The project will allow stakeholders to conclude whether exploring a paradigm change in nutrient containing waste flow management is feasible and desirable.