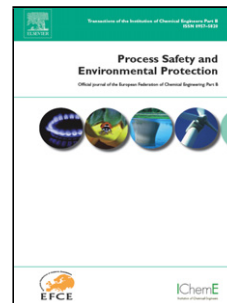


## Accepted Manuscript

Title: DEALING WITH A CLUSTER OF LARGE  
CENTRALIZED MUNICIPAL WASTEWATER  
TREATMENT PLANTS. A CASE STUDY

Authors: Sabino De Gisi, Raffaele Pica, Patrizia Casella,  
Michele Notarnicola



PII: S0957-5820(18)30433-6  
DOI: <https://doi.org/10.1016/j.psep.2018.07.002>  
Reference: PSEP 1446

To appear in: *Process Safety and Environment Protection*

Received date: 12-6-2018  
Accepted date: 1-7-2018

Please cite this article as: De Gisi, Sabino, Pica, Raffaele, Casella, Patrizia, Notarnicola, Michele, DEALING WITH A CLUSTER OF LARGE CENTRALIZED MUNICIPAL WASTEWATER TREATMENT PLANTS.A CASE STUDY.Process Safety and Environment Protection <https://doi.org/10.1016/j.psep.2018.07.002>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

# DEALING WITH A CLUSTER OF LARGE CENTRALIZED MUNICIPAL WASTEWATER TREATMENT PLANTS. A CASE STUDY

Sabino De Gisi<sup>1,\*</sup>, Raffaele Pica<sup>2</sup>, Patrizia Casella<sup>3</sup>, Michele Notarnicola<sup>1</sup>

<sup>1</sup> Department of Civil, Environmental, Land, Building Engineering and Chemistry (DICATECh), Polytechnic University of Bari, Via E. Orabona n.4, 70125 Bari (BA), ITALY

<sup>2</sup> ENEA, Italian National Agency for New Technologies, Energy and Sustainable Economic Development, ENEA, USER-R4R Lab., Via Martiri di Monte Sole 4, 40129 Bologna (BO), ITALY

<sup>3</sup> ENEA, Italian National Agency for New Technologies, Energy and Sustainable Economic Development. Department of Sustainability, P.zza E. Fermi, 80055 Portici (NA), ITALY

\*Address correspondence to:

**Sabino De Gisi**, Department of Civil, Environmental, Land, Building Engineering and Chemistry (DICATECh), Polytechnic University of Bari, Via E. Orabona n.4, 70125 Bari (BA), ITALY; e-mail: sabino.degisi@poliba.it

## Highlights

- A cluster of 5 large facilities with full-scheme treatment were investigated
- After initial cluster assessment, scenarios for future upgrading were proposed
- Large plants were characterised by limited resilience to functional upgrades
- Multi-criteria analysis focused on economic, energy and environmental estimations
- The best scenario was the one based on the re-functioning of the anaerobic digestion

## ABSTRACT

The article deals with a cluster of large centralized municipal wastewater treatment plants (LCMWWTPs) assessing the main economic, energy, environmental and management

Download English Version:

<https://daneshyari.com/en/article/6973904>

Download Persian Version:

<https://daneshyari.com/article/6973904>

[Daneshyari.com](https://daneshyari.com)