



## ORIGINAL NEED

The Penitentiary of Gorgona (400 inhabitants) needed a system to treat discharges, able to work also in absence of specialized technical assistance. Considered the scarcity of water it was necessary to reuse treated water. Constructed wetlands showed as the most adapt technology for answering these needs.



## DESCRIPTION

Gorgona plant consists in a primary treatment system (grid and Imhoff tank) and in a secondary treatment system with horizontal subsurface flow basins disposed in two by two in parallel and followed in series by a wet grassland functioning as filter (or lung) between treatment system and environment. During summer water can be taken for irrigation aims after basins 3 and 4 or after the wet grassland.

### LOCATION

Isle of Gorgona  
Municipality of Livorno (LI)  
Tuscany  
Italy

### COMMITTANT

Minister of Justice

### NUMBER OF PERSON EQUIVALENT

100-400

### WASTEWATER TYPOLOGY

Urban

### TYOLOGY OF PLANT

HF (2 lines in parallel) + wet  
grassland + reuse

### AREA (M2)

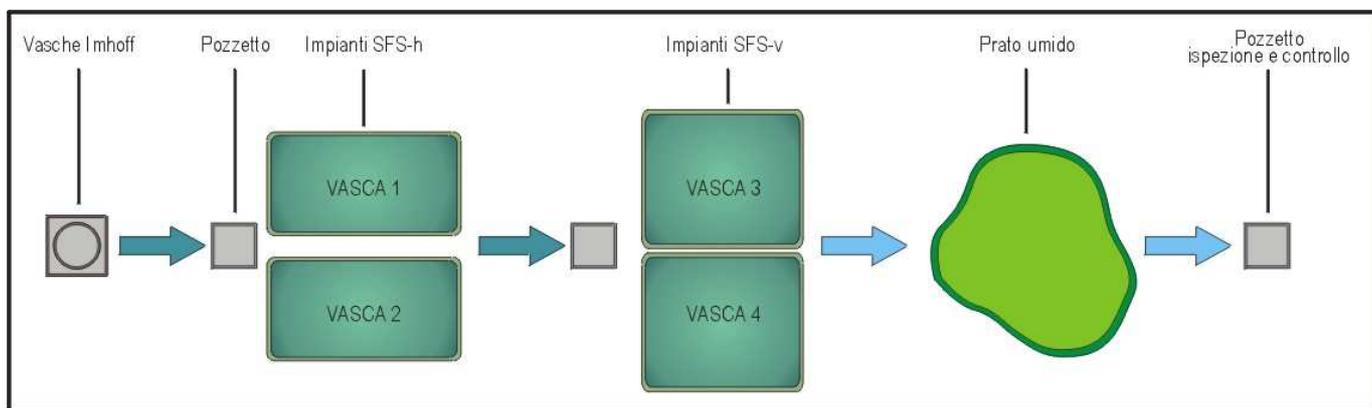
1350

### YEAR OF REALIZATION

1996

## RESULTS

Obtained results during 1999, with the 4 basins working, show that at the outlet the depurative efficiencies are greater than as requested by present law (DL 152/99) for discharge in superficial sea water for less than 2000 person equivalent, also in the months with the greater loads.



Scheme of the plant