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PA : Camargue, France

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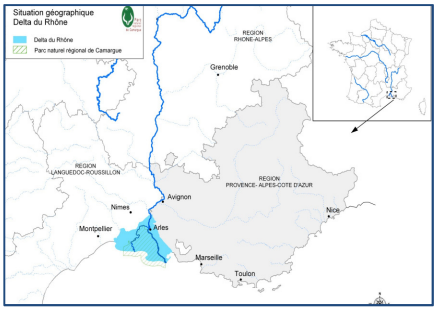
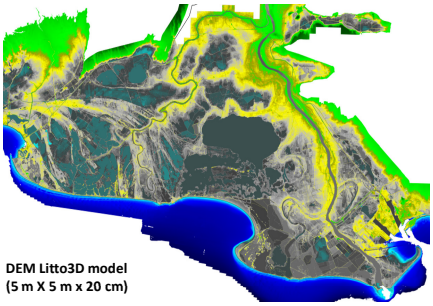
A formely dynamic delta, currently diked and managed through hydraulic structures

LOCATION : Rhône delta in southern France. PA limits are those of the MAB Unesco Reserve (197 000 ha). Climate is Mediterranean with 660 mm rainfall annually and 1500 mm of evapo-transpiration

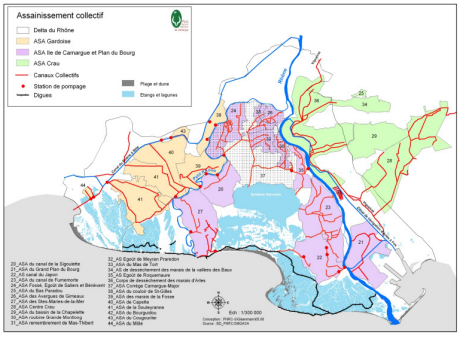


HYDROMORPHOLOGY: A flat area (-2 to 5 m alt) where topographical variations are related to former river channels and alluvial deposits. Diking of the Rhône river and coastline over 100 yrs ago with 730 Mm3 of water pumped each year

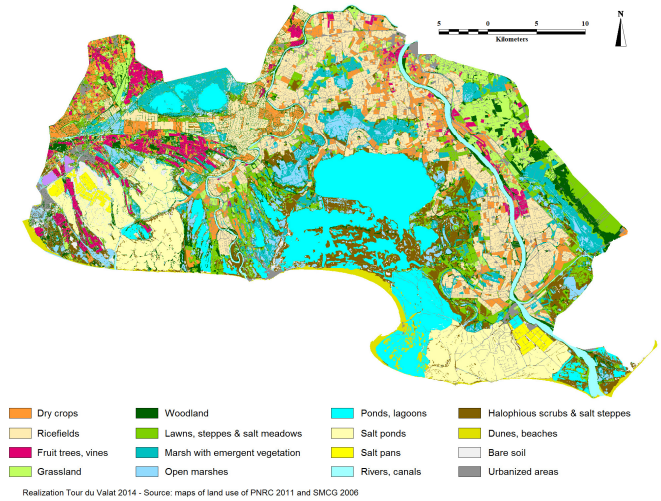


DEM Litto3D model (5 m X 5 m x 20 cm)

WATER MANAGEMENT: 48 mini waterboards for irrigation/drainage of 80% of the area through 400 km of primary channels . Water pumped from the Rhône river for agriculture and from the sea for salt production.



A combination of public and privately owned lands under different protection status and anthropogenic influences



Various wetland types having different seasonal water requirements and salt tolerance

Ricefields irrigated in April-August

Permanently flooding hunting marshes

Halophilous steppes under restoration

Temporary & brackish bulrush marsh

Halophilous scrubs flooded with rainfall

Temporary lagoons

Goal: to maintain wetland services while preserving the Mediterranean flora and fauna under global change pressures

Fishing

Reed harvesting

Salt exploitation - Agriculture

Ecotourism - Nature conservation

Cattle raising

Waterfowl hunting

Scientific expectations from Ecopotential:

Interdisciplinarity : Synergy between ecosystem knowlegde, field and remotely-sensed data to develop relevant, robust and accurate monitoring tools to quantify changes affecting wetland functions and services

Priority needs in terms of management/conservation:

Wetland monthly hydrology: to document gain/loss in Mediterranean biodiversity, habitat shift and extent, changes in management practices (need to detect water below emergent vegetation cover)

A synoptic vision of water and wetland quality: Indirectly estimated through water turbidity, colour, development of submerged macrophytes

Turnover in crop types (due to salinisation): spatial assessment of crops cultivated annually (based on their phenology) to improve collective management of agricultural land and to estimate water allocation to croplands vs wetlands

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