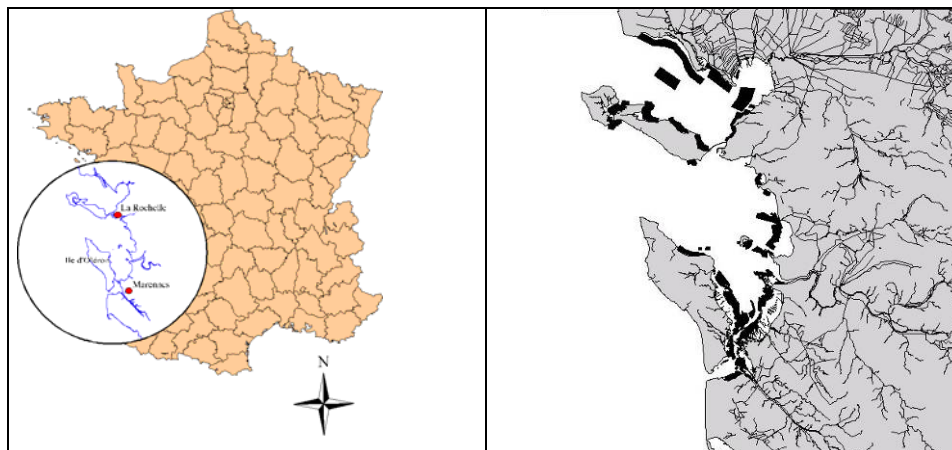


WT 7.10 PERTUIS CHARENTAIS SITE - ATLANTIC- FRANCE

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2. The Marennes-Oleron and Charente system is located on the Atlantic French coast

3. Characteristics

<i>Marine System</i>	The Pertuis Charentais (40x80 km), located on the Atlantic coast is protected by two islands and is characterized by shallow waters (0-15 meters), intertidal mudflats, strong currents, extended wetlands and three main river discharges. Bird migration site, wetlands protection, sole nursery and benthic habitat are the main environment protection features. Integrated development schemes collapsed due to conflicts concerning environmental protection, space uses and freshwater sharing.
<i>Watershed</i>	The river Charente extends on a 10000 km ² watershed.
<i>Human Activities</i>	EU leader for extensive aquaculture production (mussels and oysters), the Pertuis are also characterized by important summer tourism activity involving urban and harbour coastal development. Hinterland, agriculture over-exploited freshwater resources for maize culture
<i>Impact Responses</i>	Over-exploitation of freshwater resource (both surface and groundwater). Bio-chemical pollution (bacterial contamination, agriculture wastes), Ground and surface water deterioration.

4. Policy

<i>Policy issues</i>	<ul style="list-style-type: none"> - socio-economic benefits to shellfish farming : trophic resources for oyster (phytoplankton production, organic matter, etc) depends on freshwater inputs (volumes, nutrients) - mutual socio-economic benefits to both tourism and shellfish farming : management of freshwater quality (bacteria, viruses) on recreational and shellfish growing areas - sustainability of marine and upstream activities especially for this site chosen as an EU intercalibration site in the frame of the Water Framework Directive.
<i>Policy changes</i>	<ul style="list-style-type: none"> ▪ Failure of a coastal zone integrated management plan (SMVM) because of use conflicts (principally between environmental protection and socio-economic sectors). ▪ Agreement between actors (environmental protection, agriculture, shellfish culture, drinking water distribution) freshwater use on Charente river. Driven by politicians <p>Proposed: Setting up of a "coastal waters management plan" (SMVM) equivalent to the "terrestrial" one and procedures of negotiation for freshwater management</p>

5. Stakeholders and Institutional Governance

<i>Major organisations</i>	EPTB Charente - Institution Interdépartementale du Fleuve Charente, Agence de l'eau Adour-Garonne
<i>Other leading organisations</i>	GRAP Poitou Charentes - FREDON et Service régional de la protection des végétaux Stakeholder organisations? Any others?

6. Partner Collaboration

<i>SPICOSA Partner Collaborations.</i>	Partners: CEMAGREF, SOGREAH, and UBO University of Western Brittany
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7. Systems Studies

<i>Long time series</i>	<p>Marine:</p> <ul style="list-style-type: none"> - temperature, salinity, nutrients, particulate matter, chlorophyll (since 1976 on 5 sampling sites) - chemical contaminants (since 1975) - microbiological contamination (since 1989) - harmful algal blooms (since 1986) - oyster stocks (century) - oyster growth and condition index (since 1978) - oyster mortality (since 1994) - oyster larvae abundance (since 1956) - mussel growth mortality (since 2000) <p>land:</p> <ul style="list-style-type: none"> - pesticides and nutrients on Charente river since 1992 - water fluxes at the outlet of Charente river since 2001, salinity since 1976 - land use, agriculture systems and practices, policies
<i>Research Projects</i>	<ul style="list-style-type: none"> - TROPHEE « Trophic capacity of European Ecosystems » (1990-1994, FAR): assessment of carrying capacity of cultivated shellfish areas – Coordinator: Ifremer - INTRMUD “ Morphological development of Intertidal Mudflats ” (1996-1999 – MAST3) : dynamics of intertidal mudflats – coordination : Plymouth - ESSENSE « Effects of Shellfish culture and options for Sustainable Exploitation » (1999-2001) : to improve knowledge for sustainable development of shellfish culture and exploitation – coordinator Netherlands Institute of Fisheries Research (Netherlands) - OPCOM « Operational Modelling for Coastal Zone Management » (MAST3, 1997-2000) : implementation of operational models in the coastal zone – coordinator : HYDROMOD (Allemagne), other partners : IFREMER-CREMA (France), IST (Portugal), Hidromod (Portugal), ERIV et EIA (Finland). - Monitoring networks : REMI, REPHY, RNO, REMORA - REPER is a observatory for research on environment in Pertuis Charentais : organization of monitoring networks, implementation of databases, permitting studies of interrelations in complex ecosystem impacted by anthropogenic activities <ul style="list-style-type: none"> - Programme Interface (historical project) From the watershed to the maritime area: water resource as object of an integrated and applied research. A case study : Charente watershed and Mer des Pertuis - Research on the Charente catchment area and the Marenne-Oléron's bay : continental part : 1994-1998 The aim of this work was to study the impact of the Charente's catchment area on the trophic system of the Marenne-Oléron bay and the consequences on its selfish farming. - On the large watershed scale, a scientific collaboration between WQRU and IFREMER is presently running (D. MUNARON thesis in relationship with CREMA L' Houmeau and La Tremblade Station) using MARS 2 D advection-dispersion model to simulate Charente pesticide runoff behaviour in sensitive littoral environment of Mer des Pertuis lagoon (French 1st oyster production site). - Programme Transpest 16 - MEDD pesticides (2005) – indicators (transfer of pesticides from agricultural areas to rivers) at the watershed level – sampling and monitoring of water quality at the same scale. - Programme MEDD 2006 – test of pesticides indicators at the plot and watershed scale. - Effects of Water Framework Directive on agriculture at the French national scale (CEMAGREF, French Ministry of Agriculture, DGFAR 2004-2005).
<i>Social study</i>	<ul style="list-style-type: none"> - Analyse du jeu des acteurs et des normes légales de la gestion des pêches et de la conchyliculture dans les pertuis charentais. Darbon D., Deglise C. Institut d'études politiques. Sciences Politiques Bordeaux.