

## 1. Where



Venice Lagoon has a surface area of about 550 km<sup>2</sup>. It is not only the largest lagoon, but has the widest tidal range of the Mediterranean Sea. Three inlets, Lido, Malamocco, and Chioggia, connect it to the Northern Adriatic Sea. The lagoon can be split into four first-rank basins, named Chioggia, Malamocco, Lido, Treporti, with surface areas of about 130, 170, 100, 150 km<sup>2</sup> respectively.

Two main cities, Venezia and Chioggia, and a number of towns and villages with a total population of 400,000 are located around the lagoon and on some islands. About 20 million tourists visit the historical city of Venice each year while the resident population is only 60,000.



## 2. The Policy Issue

In the Venice Lagoon, nowadays, one of the most important economic activity is fishing of manila clam *Tapes philippinarum*, accounting for 60% of national production, but its actual sustainability is uncertain: over-fishing, 'fishing down the food-web', sediment resuspension, damage to benthos and habitat destruction are recurrent problems.

Adverse effects associated with shellfish farming activities may concern, environmental hazards, such as organic enrichment of the sediment around shellfish farms, reduction in food supplies for other filter feeding organisms, habitat disturbance and degradation. The economic and social aspect of the topic are related to guarantee a sustainable economic growth of local community, preserving clam from over exploitation and ensuring high food safety standards to consumers.

The lagoon clam fishing in a open access system has been restricted over time looking for alternative management strategies according to a sustainable fishery. This task has been accomplished by evaluating different fishing scenarios: from the open access fishing to the traditional fishing (as past) and, eventually, to the restricted clam fishery.

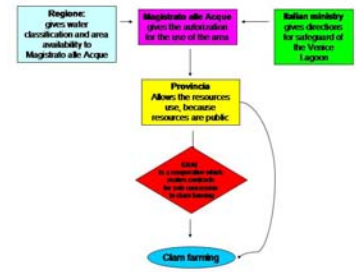
The issue "methods of managing *Tapes philippinarum* fishing" was chosen in order to decide how to allocate clam fishing areas, how to manage them, how to control or how to discourage illegal clam fishing, especially in polluted or prohibited areas.



*Tapes philippinarum*

## 3. The stakeholder partners

- ❖ GRAL- Gestione risorse alietutiche lagunari s.c.a.r.l. (cooperative which makes contracts for sub-concession to clam farming)
- ❖ CIRSPE- Centro Studi di Ricerca di Federcoopesca (research activity institute in the framework of the Federation of fishing cooperatives)
- ❖ Federcoopesca- Federation of fishing cooperatives
- ❖ MAV-Magistrato alle acque
- ❖ Provincia, Fishing section
- ❖ Federconsumatori, consumers' association
- ❖ Regional administration
- ❖ CAM s.r.l. clam farming



## 4. Economic dimension of the CZ system

Goods & services	Economic method	Beneficiaries (CATWOE definition)
Clam aquaculture	Market price	Owners, customers, actors
Tourism & recreation	Stated preference methods (contingent valuation, through benefit transfer procedure)	Owners, customers, actors
Disease	Stated preference methods (contingent valuation)	Customers victims
Water quality	Revealed preference methods (recovery cost and for defensive expenses)	Owners, customers, actors
Environmental services (Photosynthesis, Nutrient cycle)	Stated preference methods (contingent valuation through benefit transfer)	Owners, customers, actors

## 5. Venice Lagoon Virtual System conceptual model

