

2009



Report on Flood-tide in the  
Lagoon of Venice



[www.ourvenice.org](http://www.ourvenice.org)

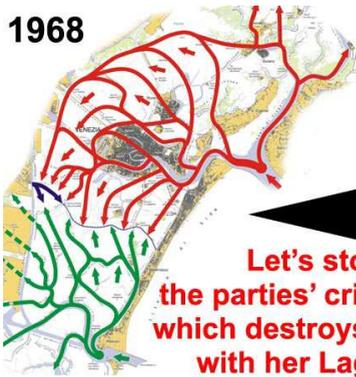
The Venice Public Health Committee



Nuovo Rinascimento Edizioni  
Venezia

# Report on Flood-tide in the Lagoon of Venice

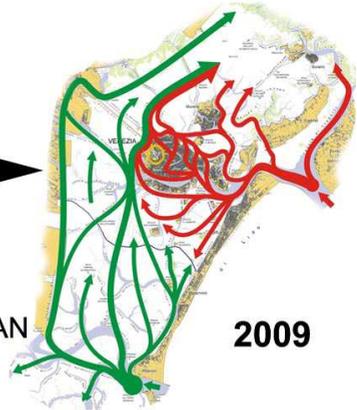
1968



THE HYDROSTATIC BALANCE  
WHICH ALLOWED THE  
SAFEGUARD OF THE  
LAGOON OF VENICE  
TILL 1968

**Let's stop  
the parties' criminality  
which destroys Venice  
with her Lagoon!**

THAT BALANCE HAS BEEN  
TRANSFORMED IN WHIRLS BY  
50 YEARS OF INSANE  
INTERVENTIONS OF THE BARBARIAN  
"ADMINISTRATIONS"



2009

by Umberto Sartori

*This work is dedicated to the memory of my father Sergio, whose love for the Lagoon has formed my sensibility since childhood.*

*Thanks to Stefano Alessandri for sharing with me his experience about the inner coast of the South Lagoon.*

*Thanks also to the Authors of “Morfologia Storica della Laguna di Venezia”, Arsenale ed., Venezia 1988, for the great work with the ancient maps and further historical data.*

*I could complete the Historical Centre stream model thanks to the information by the Canottieri Giudecca about main stream directions along the Lido. Information that I have later personally verified.*

## **How 50 years of insane hydraulic interventions in the Lagoon of Venice have ruined its multi-secular artificial balance**

Natural Lagoons are dynamic organisms, subject to seasonal shape changes, to open in gulfs or to become land in the short time of decades.

The Venetians resolved to intervene on these natural dynamics generated by the double action of the Sea and the Rivers, in the aim of steadying the Lagoon of their cities in a shape the most convenient to the preservation, the development and the defence of Venice in the shelter of its calm, healthy and teeming with fish, waters.

Proper Magistrates drove the fresh and the salty waters in the double scope of maintaining them quiet and healthy. As is allow a daily water replacement with the Sea but avoiding the formation of fast streams.

The marvellous result obtained by Venetian hydro-engineering was *fissare le velme*, (the fixing of the muds), as is to balance the quantity of sediment phased in the Lagoon by the rivers and by the Mainland erosion, with the quantity removed into the open Sea by the action of tide streams.

About 400 years were taken (between 1100 and 1600) to steady the Mid Lagoon were Venice lays, and 200 years more to reclaim the South and North Lagoon while freeing the Port of St. Nicolò by the influence of the sediment of the Piave river.

It was possible to achieve such objectives with the effort of enormous hydraulic works, thanks to the special structure of Venetian political power, able to safeguard the prestige of Authority and in the same time to redistribute itself among the People in the executive phase.

Despite the Wars and the misfortunes of Venice in those Centuries, the synergy of decisional skill, global theoretical perspective, local wisdom and People unity, was able to setup a juxtaposition between forces of Nature, definitely not one conflictual, based on the opposition between those Forces and human skills. These skills were used in order to drive the waters and not to fight or stop them.

Avoiding the filling in of the Lagoon and its erosion was but one of the aims of the Venetians in diverting rivers and consolidating banks.

Not secondary was the scope to allow the Sea to infiltrate the unhealthy coast marshes, transforming them in wide salty lakes connected through a net of brackish rios.

Near the end of 16<sup>th</sup> Century, fine tuning the absorbing capacity of these new Lagoon areas South of St. Leonardo, through artificial canals called “Garzoni”, it was possible to balance the tide streams generated by the two Port mouths in proximity of the political and commercial centre of the Most Serene Republic.

Conditions were created where each stream would counterbalance the other’s velocity in a zone located half the way respect the isle of Lido. This area would not only moderate water speed in the whole Lagoon, but also work as a dynamic mud storage, and was called “Zona di Partiacque” (watershed area).

To obtain this area of staunch water right behind the Historical Centre of Venice, also breeding grounds like those survived of St. Ilario Abbey and Historical Heritages like St. Marco in Boccalama, were sacrificed .

Leaving on the contrary wild the stream from St. Nicolò allowing it to ride till St. Leonardo and then back on Venice with such a run-up, would have been Venice itself to be eroded in a short while.

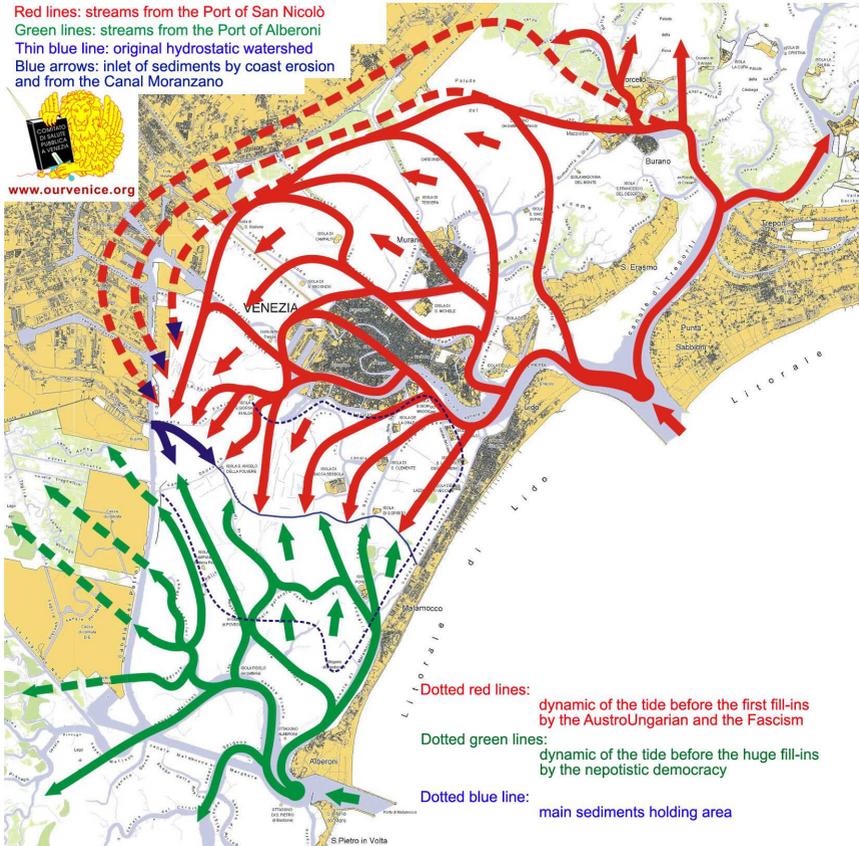
Riseing instead the underflow through the Port mouth of Malamocco, that stream was empowered enough to push it to an ideal arc between Malamocco (town) and Fusina, where the Moranzano Canal could feed under human control the watershed area with new sediments to be slowly released to the Sea.

This admirable work of harmonization with Nature was so well devised and realized to resist along centuries, preserving the Gem it was aimed to protect.

The ideological decay in safeguarding the Lagoon of Venice begins probably with the illuministic arrogance, pretending to reduce the Lagoon to a totally artificial event, starting a oppositive, instead of the ancient juxtapositive, procedure between Human Works and Nature.

## THE MULTI-SECULAR HYDROSTATIC BALANCE CONDITION

Red lines: streams from the Port of San Nicolò  
 Green lines: streams from the Port of Alberoni  
 Thin blue line: original hydrostatic watershed  
 Blue arrows: inlet of sediments by coast erosion  
 and from the Canal Moranzano



To the illuministic age belongs infact the *linea di conterminazione* as is the establishment of an artificial Lagoon coast line, applying fixed and improper Cartesian parameters to a reality itself fickle, accordingly with the fractal logic of Nature.

Nevertheless, the strong Tradition founded by the *Savi alle Acque* and the deep feeling tying Venetians to the Water, succeeded in influencing the Good Common Sense of the Austro-Hungarian; the Lagoon balance was preserved also across that Domination.

Not even the much less common sensed occupation by the Savoias (Kings of Italy) was able, in its beginnings, to lower the ancient Authority in safeguarding the Lagoon, maintained by the *Magistrati alle Acque* on their Lagoon.

The *Statuto Albertino*\*, indeed, started to oust that power, saddling important offices to elements completely inadequate for cultural belongings and local knowledge.

It was with the first partitioning of the Monarchy toward democracy, that is the call to Govern of Mr. Benito Mussolini and his “bivouac of squadristi”, when the hydrostatic balance tenure of the Lagoon started to be seriously menaced.

Huge fill-ins in Marghera and St. Giuliano, doubling, with the *Ponte Littorio*, of the already inopportune trans-lagoon bridge wanted for army reasons by the Austro-Hungaric Empire, excavation and fill in of various rios inside the Historical Centre, were the first symptoms of the actual ruin brought by the transforming of that dictatorial democracy in this sectarian one, which has distinguished Italy along the last 70 years.

I think it is clear enough from the context that with the word “democracy” I do not refer to the bunch of fabrications and forgeries we have been stuffed with by the parties system demagogues, but, along with the ancient and etymological meaning, to the social structure of the barbarian horde, where the more brutal in crime rules.

The “power to the rabble” (this is the meaning of “democracy” for the ancient Greeks and for the Fathers of Political Science), just installed in its worst shape of nepotistic electioneering, started nullifying the sacrifice of St. Ilario and St. Marco in Bocalama.

The salty marshes used to empower the stream of Malamocco without pointing it directly against the Historical Centre, were filled in with the First Huge Act of Vandalism, known as *casse di colmata*.

Close to them a new canal is excavated, called *Canale dei Petroli*, whose size is incompatible with the balance of the dynamics of the Lagoon, realizing the Second Huge Act of Vandalism against the multi-secular hydrostatic balance of the Lagoon of Venice.

The capacity, velocity and direction of the stream from Malamocco were dramatically modified, not in function of a better hydrostatic

\* The *Statuto Albertino* was a bureaucratic setup of the Italian Kingdom prescribing that officialdoms from the South should perform their duty in the North of Italy and viceversa.

balance, but just complying with commercial interests as much wreched as short-sighted, in total disregard of the elemental principles which safeguarded the Common Wealth and the Sacred Water Walls of Motherland.

The consequences of this double, huge hydraulic nonsense were both immediate and long term. The impact of the empowered direct wave from Malamocco eroded and erodes the salty marshes South and West of St. Leonard.

The inhabited islands *Torson di Sotto* and *Rivola Vecchia* are erased to the bone in the turn of five years, notwithstanding the slapstick comedy of defending them with palisades.

Slamming against the barrier of the *casse di colmata*, and pushed fiercely by the enormous mass of water convoyed by the fool *Canale dei Petroli*, the tide from Malamocco unbalance the resistance of St. Nicolò's wave on top of the watershed line, bending it more and more towards Marghera and St. Giuliano and in a stream of waters converging in whirl.

Less than twenty years are sufficient to bring the tide from Malamocco along the Lagoon inner coast up to Tessera, rising more and more its velocity and capacity of underflow and erosion.

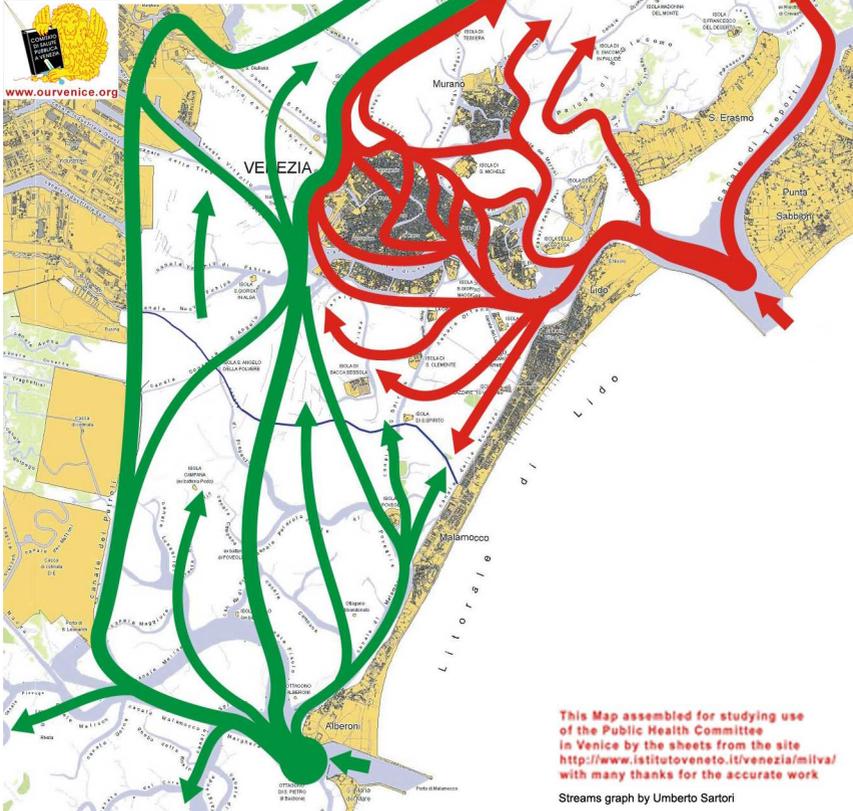
Twenty years more and comes into action the Third Huge Act of Vandalism against Lagoon balance, better known as "MOSE project", which modifies the stream since the Port Mouth of St. Nicolò, diverting and narrowing the nozzles of the Lagoon.

As we'll see in the next page, today, 2009, the watershed area is wracked. The tide entering from Malamocco compresses that entering from St. Nicolò pumping it across the small North-South rios of the Historical Centre, which were born and structured to support just light movements of flow and flood.

Instead of balancing the opposite wave, the tide from Malamocco literally bend in whirl that from St. Nicolò. Level with *Sacca Fisola*, the two streams yet proceed side by side in direction of the North Lagoon. Their combined impact bends and convoy, by the *Canale di Cannaregio*, also the stream entering from St. Nicolò through the North-South rios and along the Murano and Fondamente Nove canals.

## SURVEY ON DYNAMIC OF FLOOD TIDE APRIL 2009

- Red lines:**  
streams from the Port of San Nicolò
- Green lines:**  
streams from the Port of Alberoni
- Orange circle:** area of serious turbulence
- Thin blue line:**  
original hydrostatic watershed



This Map assembled for studying use of the Public Health Committee in Venice by the sheets from the site <http://www.istitutoveneto.it/venezia/milva/> with many thanks for the accurate work

Streams graph by Umberto Sartori

The hydraulic system has been changed from lagoon to that of a port of strong undertow. In the pictures we can see the speed of the stream in the Port of Malamocco and in the rios of the Historical Centre.

Like a saw the water produce different effects while going and when coming. The flood tide opens the way and move the debris, so that the flowing tida may thrust its teeth more deeply in what stands in its way.



The tide stream velocity in the mouth of the *Canale dei Petroli* shows well the seriousness of the damages even on simple works, constantly under maintenance being portual installations.



Here what remains of the isle *Torson di Sotto*, in St. Leonardo area, under the violent tide dynamics caused by the excavation of the *Canale dei Petroli*.



Till today, the barbarian pretend to safeguard the Lagoon through palisades, which are really a mine for sly contracts and businesses, used by the parties system to tear to shreds the Common Good and share it in between themselves.

*Palo fà paluo*, (“a single pole driven in the Lagoon can create a marsh around itself”) was a saying of the Ancient Venetians, when they were taking care of their Lagoon. But in those times the waters were pacified. If the water runs like in a torrent, it will eat the pole and all the land it should protect. Lone result of this continuous work for palisades is to seed the Lagoon waters with the stumps of the poles, which remain for years under the surface of the water, creating traps able to damage the hulls and the engines of the Lagoon boats.

Running water unfortunately eats not only remote marshes, but intensively attacks the Historical Centre too.

Watching live, one gets the sensation of looking at a mill-race speed. The situation of undertow must be indeed regarded as much more disruptive than the river-like one, being the undertow a continuous alternate movement, similar to that of a saw.



The *rio de la Misericordia*, during flow-tide, is supercharged by its two mouths on the North coast, and creates a small rapid when flowing away through the *rio dei Servi*, which is its lonely and narrow way towards South and the Sea by means of the Grand Canal.



The way of this water is utterly narrowed, before flowing in the Grand Canal, when entering the *rio di San Marcuola*, where we can observe even more disquieting whirls.



All the North-South *rios* today are under such a stream stress to be incompatible with their structure. In the picture above we can see the water “cringing” at the fork between the *rio di SS. Apostoli* and the *rio Widmann*. Both the *rios* are windings, and used, in the Centuries of the Lagoon hydrostatic balance, to support just the minimum of stream necessary for a healty replacement with fresh water from the Sea. The very light corrent could respect the buildings foundation, and allow the rowing traffic on important veins of the City’s life..

The clearest evidence of the increased speed of tide streams can be observed along the *canale di Cannaregio*, where the water literally boils passing under the *ponte delle Guglie* and the *Treponti*, and whose full corrent is already too strong to be faced by oars, unless you are a rowing champion in the mood of training hard.

You can find more pictures showing how serious is the danger and how spreaded in most *rios* is the damage done yet, at this URL:

<http://venicexplorer.net/observer/images/maree-venezia-2009/index.php?hlang=en>

## The effects on the buildings' basis

In the following photos we can see the effect of the hydraulic saw on the water foundation of the buildings. These are but a few of the innumerable ruptures that can be observed everywhere along the *rios* of Venice.

Remark how erosion is everywhere lengthwise. In particular the first two pictures, which refer to the flop down of the *Fondamenta* in front of Diego Valeri school, show how erosion is deep even under the low tide level the photo has been shot in.

The pick work of the more and more violent waves from the boats, now is joined by the steady shovel work of the more and more whirling tide stream.

There is no more hope for Venice and her Lagoon if we do not run back to the wisdom and the Virtue of the Fathers.



Fall in of the *Fondamenta* on *rio del Tentor*, front of the Diego Valeri school (*Dorsoduro*).



*Rio de Santa-Catarina /corner with rio Racheta (Cannaregio)*



*Rio de le Becarie (San Polo)*



*Rio de le Vergini (Arsenale di Castello)*



*Rio de la Fava / corner with rio dei Todeschi (San Marco)*



Fall in of the *Santa Chiara* bank along canal di *Scomenzera* (*Santa Croce*)



If Water has started its work of destruction from the foundations, the Fire of Sulphur melted in the Air busily collaborate to bring the Work of Man to the mud of the beasts. Do people want to be “mass”? “Mass” means “mound of clay”, mud pie indeed.

Venice does not deny Her magic. She mirrored the Venetian People in its greatness and now She admonish them of their misery, and abandon them.

But not only them. She’s abandoning the whole World to a present of barbarity.

**Sign and convince others to sign**

# **the Petition**

**for the Public Health Committee in Venice**

**[HTTP://WWW.OURVENICE.ORG](http://www.ourvenice.org)**