

On behalf of the Mayor of Venice, Prof. Massimo Cacciari, it is truly a great pleasure and honour to welcome the great number of participants from all over the world to Venice on the occasion of this exceptional symposium.

It represents an important occasion for this unique and special town built on water to witness over 600 scientists gathered together here to discuss altimetry from space.

Venice was born on the sea more than a thousand years ago and it was the same sea that defended it; Venice had no walls to protect it..!

In fact, the challenge that the city must face does not regard the conservation of the lagoon's natural ecosystem, which without human intervention would really be non-existent today, but rather sustaining [maintaining] the difficult [dynamic] equilibrium between man and nature –two elements tied to each other, but with very different needs.

The characteristic fragility and instability of Venice and its lagoon, the largest in Italy covering a surface area of 550 square kilometres, can also generate an unbalance in naturally and artificially derived elements. The lagoon ecosystem is a transition zone between land and water in a perennial state of instability. Two phenomena, which in the last century have caused a land elevation loss of over 23 centimetres, are:

- eustasy, that is the change in sea level associated with global climate changes; and
- land subsidence, that is the lowering of land surface elevations.

The joint effect of the two phenomena exposed populated areas of the lagoon to a significant increase of flooding.

The “acqua alta” or “high water”, as the Venetians call the periodic flooding of their city reminds us of the chances we are taking when we tamper with the equilibrium of our environment. It also reminds us of the duty that marine scientists have to understand how the earth system works and to contribute with this knowledge to its sound management and use.

Regrettably the man-made city of Venice is now faced with problems caused by its natural environment. Not only has its biggest problems been the ones caused by man, but which man believes himself to be a supposed improvement in the quality of life.

How appropriate, I thought, here we are attending a scientific symposium that presents some of the most crucial issues linked to the sea, and to humanity's interaction with it, and the sea lies just before us [or: just beyond us].

Hopefully the scientific concepts and tools that we will be able to develop in the field of satellite oceanography during the next five-ten years will bring us a deeper understanding of the issues at stake, as well as the opportunity to meet once again in the enchanted city of Venice.

I am sure some of you have participated in other symposia held in Venice. I refer to the past editions of “Oceans from Space” that have been held every 10 years in Venice since 1980. This long awaited symposium on radar altimetry (15 years in fact!) is the first one and it could be the beginning of a good tradition, and why not propose to hold it every 5 or 10 years?

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