



# THE FUTURE OF VENICE

AND ITS LAGOON IN THE CONTEXT OF GLOBAL CHANGE

4.

Workshop Report



Impact of Global Change on the  
Socio-economic Development of Venice

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## Impact of Global Change on the Socio-economic Development of Venice

Workshop organized by  
UNESCO Venice Office and COSES

4-5 October 2011. Venice (Italy)







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## Foreword

The urban ecosystem of Venice and its Lagoon is among the most studied urban and environmental systems in the world. Acting as neutral broker and facilitator, UNESCO Venice Office has mobilized expertise in the interdisciplinary fields to identify and discuss the scientific, environmental, cultural and socio-economic challenges faced by the World Heritage Site of Venice and its Lagoon in the context of global change.

This document in your hands presents a summary of the results and discussions from the fourth of four thematic workshops that were held to gather the necessary expert inputs needed to evaluate the current situation of Venice and its Lagoon and to contribute to a shared sustainable vision for its future. The workshop on *The Impact of Global Change on the Socio-economic Development of Venice* was held 4-5 October 2011 at Palazzo Zorzi in Venice, Italy and was organized in partnership with COSES. The results from this workshop will form a basis to identify the challenges and perspective scenarios for the socio-economic development of Venice, requiring strategic decisions to be soon taken in order to avoid the slow deterioration of the city's cultural heritage and society.

The results of the thematic workshops will be used by UNESCO to facilitate the vision, strategy and management plan for Venice and its Lagoon, and to prepare in collaboration with the local authorities a follow-up report to the one already elaborated by UNESCO in 1969 after the devastating *acqua alta* of 1966. This new report is intended to help guide sound decision-making and further enable sustainable management of not just the World Heritage Site of Venice and its Lagoon, but of urban coastal and lagoon systems worldwide that are facing challenges stemming from global change phenomena, and in particular those in the South-East European and the Mediterranean regions.

The socio-economic development of Venice and changes in the city's population, the transportation, industry, trade, services and tourism in the Lagoon, as well as in the surrounding territory, are all densely interlinked. This report provides sound insight as to some of the potential consequences, both positive and negative, in trying to balance the above aspects and serves as a source of guidance for the local decision-making processes necessary for safeguarding Venice and its Lagoon.

## Introduction

This fourth workshop concludes the preliminary stage of an interdisciplinary survey which - forty years after the historical "Venice Report" - addresses the future of the city in a totally changed international context, with local perspectives that seem mostly to have followed the logic of "inertial development."

From Sustainable Venice: *Suggestions from the Future* by Ignazio Musu:

*The first scenario proposed is that of inertial growth. Essentially, this is the scenario of spontaneous evolution without significant public policy intervention. It is a scenario characterized, firstly, by the growth of a specialization in tourism in line with the current model in which commuting is dominant, secondly, by a growing separation between the economic models of the historical centre and of the mainland, and, as a result, by the progressive integration of the mainland alone into the metropolitan area together with Padua and Treviso. Finally, it is characterized by an uncontrolled evolution of Marghera, leading to its probable dismantling.*

*The scenario of spontaneous growth entails serious threats to sustainability. Indeed, it is a model marked by the risk of unrestrained pressure on the artistic, architectural and environmental heritage; by a progressive degradation in the city's social and cultural base with an increase in the likelihood of phenomena such as corruption and organized crime; by a widening gap between the short-term objectives of those who operate in the local economy and objectives for the long-term protection of the environment and the artistic and architectural heritage - a gap bound to create fewer incentives for the national and international community to take systematic action for this protection; by an increasing difficulty in organizing a unitary administrative government of the various parts of the city and of its lagoon, with an inevitable increase in conflict.*

The dimensions of the ongoing transformations can mainly be perceived in relation to the three lines of development indicated below.

- The geopolitical trends, such as the development of Asia and the impressive growth in volume, composition and trade flows, providing unprecedented intermediation opportunities to the Mediterranean. The growing role of emerging economies will have a direct impact on world trade relations, which involve also the Mediterranean basin and the intertwined specificity of the Venetian area. The most immediate consequences that will also affect Venice are related to the size and dynamics of the trade flows, and to the level of manufacturing expertise, with China that seems poised to become the first manufacturing economy in the world, moving from the seventh to the fourth place on a global scale.
- The development from below at local level - by those responsible for the service networks - of some infrastructural conditions as basis for the metropolitan perspective of the City. These initiatives are complemented by a complex intervention implemented by the Region on road and rail networks, which is irreversibly augmenting the logistics capacity of the Venetian area and its ability to encourage new investments.
- The strategic framework provided by the forthcoming New Special Law for Venice, which indicates the development of the economic base of the city as the main direction for the socio-economic growth of Venice, with special attention to indications from successful international experiences, scientific thinking and local characteristics. This refers to the capacity for attracting the creative class and craft talents, and to exemplary solutions for a sustainable use of the natural, cultural and environmental resources of the lagoon environment.

The four themes addressed on occasion of this workshop - the Port of Venice, the industrial site of Porto Marghera, Innovation and the VEGA Science & Technology Park, the Arsenal of Venice - derive from the interpretation of the above outlined evolutionary framework; this vision will of course be part of what will be further discussed here.

The chosen topics are not the umpteenth inventory of all the problems of Venice but of those which - in relation to intervention volume, impact capacity and availability of a new local and regional "constituency" - seem to be destined to determine the full range of future solutions. The global transformations have a significant influence on the socio-economic perspectives of Venice, on its changing role in the different territorial contexts of reference, and on its ability to promote the development of new significant undertakings that can attract talents and initiatives.

The proposed choice lacks tourism, since this extremely important issue has been exhaustively treated during the previous UNESCO workshop on "Culture and Development in Venice" held in June 2011.

While the requalification of the economic specialization of the area is bound to face strong competition based on the new directions taken by the world trade, tourism will offer major growth opportunities. The increased tourist flow - according to many observers Venice will shortly reach the threshold of thirty million visitors a year - urges the city to face choices that will guide the near future of its productive framework and of its territorial, urban, social, cultural and human structure.



© mararie - Tourist crowds during Venice Carnival

Venice produces culture at many levels and has sufficient energy to maintain its historical and artistic heritage, even though the relation between culture and tourism presents many critical aspects, in particular with regard to the correlation between the cultural production and the socio-economic structure of the territory. A better balance between the monumental and physical dimension of the cultural heritage and the intangible dimension of cultural productions would qualify and involve both the local community and the tourist offer, and would ultimately, contribute to the overall livability of the vast territory of Venice. For this reason, attention should be given to youth subcultures, quality craftsmanship and to the growing demand of "conscious" tourism by numerous and differentiated niches: all issues which refer to the development of the relational capital and the ability to start innovative processes in all sectors, including economic sustainability.

Recent research on the human, social and relational capital endowment and the related socio-economic dynamics currently taking place in the Veneto Region have linked the educational level of workers to the technology intensity of the sectors present in the region, in order to identify an explanatory model for the perspectives of the Venetian area. Investment in human capital and education of workers, together with the upgrading of enterprises as places that favor knowledge transfer, constitute critical factors for the growth of the entire Veneto Region. Social interactions and investment in processes that encourage them are crucial to accelerate innovation.

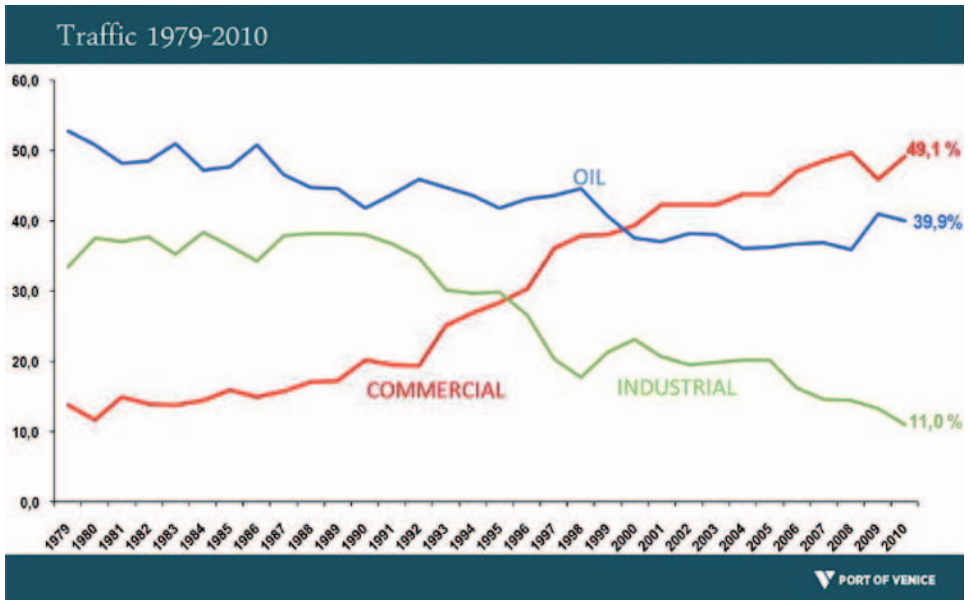


Session 1

Port of Venice

Current Trends of the Venice Port, one Harbour two Ports

The Port of Venice, in its double function of Passenger Port in the lagoon city and Commercial Port on the mainland, represents the leading dimension which links Venice directly to the world, involving the new trade flows from Asia, the metropolitan reality, the profound change in productive activities of Porto Marghera and the cooperation in the upper Adriatic Sea. The following figure shows the evolution over the last three decades, characterized on one hand by the decline in industrial traffic caused by the downsizing of the Marghera industrial site, and on the other hand by an increase in trade flows with matching services. The Venice Port currently employs over 4.500 people in logistics and services.



© Venice Port Authority - Evolution of the port traffic over the last three decades, 1979-2010

The Port covers an area of 2.050 hectares. It has an internal railroad network of 205km connecting 26 terminals, 30km of quayside and 163 berths handling about 26 million tons of goods per year. Together with the increase in logistics, the recent development of the Port of Venice is characterized by cruise ships. The maritime Passenger Port, with its eight terminals yearly hosting 2 million passengers and providing services to 200 mega-yachts, is the leading Mediterranean homeport for cruise ships. The Passenger Port employs about 1.600 operators.



© Venice Port Authority - Evolution of cruise passenger flows, 2007-2011

The Port of Venice was noted as having a relevant role both in the historical-cultural development of the city and for its economic growth potential.

In the last century the main activities of the Port were essentially connected to petroleum and industrial products, whereas nowadays commercial traffic is of primary importance. Today the Port of Venice is an important entry point to a vast area of Central Europe including the markets of North-Eastern Italy, Bavaria, Austria and Eastern Europe. It is strategically located in a position of natural and sustainable advantage within the routes of the so-called "Northern Range" (in terms of CO2 emission savings and minor sailing times, but also with regard to traffic load reduction on European motor- and railways), and functions as a gateway for the maritime traffic coming from East via the Suez Canal to reach the central regions of the European continent.

Recent estimates foresee a strong and steady growth of container transport on a global scale and a corresponding demand for logistics services. For this reason and considering the principal target markets of the commercial Port, the Venice Port Authority pursues the following main lines of development:

- maintaining nautical accessibility within the limits of the Port Master Plan (-12m);
- conversion of brownfield areas at Porto Marghera into port facilities and logistics and related adaptation of land access;
- development of the new telematic system of the Venice port community;
- project planning and construction of an offshore deep-water platform (7 nautical miles off the Lido inlet).

This last action line will meet the requirement of the Port, already connected to the trans-European networks, to berth large ships commonly used for intercontinental traffic at adequate depth.

What passenger ships and related tourism flows are concerned, Venice is a “home port” for cruise ships where 81% of passengers start and end their journey, with a spending power of €107 per person per day. A “home port” provides additional services to ships and passengers: according to a research conducted by Ca’ Foscari University cruise ship passengers spend each year €250 million in Venice, while the traffic of “white” ships accounts for an overall economic impact of approximately €500 million.

Even though the Port Authority enjoys a good level of decision-making autonomy, the urban authority is shared with the Venice Municipality. Hence a shared strategic vision with the local authorities is of crucial importance. In this regard, the Strategic Plan of Venice, dating back to 2004, recognizes the development of the Port as a central node for the growth of the city and of the entire Veneto Region logistics system. Within this framework, the Strategic Plan boosts the environmentally sustainable development of Porto Marghera.



© Venice Port Authority - Location of port activities and brownfields conversion into port facilities and logistics

The Port of Venice has its own Regulatory Plan, defined upon consultation with the City Council and in line with the municipal urban planning. Municipality and Port Authority share the vision of the exceptional growth potential of the logistics sector, capable of attracting new investments and entrepreneurship. The city intends to support the ongoing transformation of the Port of Venice into the European gateway of the North-East to Eastern Central Europe. Increasing the volume of logistics activities would strengthen the role of the city of Venice at regional level and would contribute in a substantial way to the development of the territory.

The main instrument used by the City Council to intervene in the territory is the *Piano di Assetto del Territorio* (PAT), a territorial planning tool which defines the long-term strategic choices by dividing the city into areas according to the Regional Planning Law 11 of 2004. The PAT will be followed by an Intervention Plan that will define the objectives through selected choices. The approval of the PAT is currently pending, but it can already be anticipated that the options included are intended to sustain the strategic lines pursued by the Port.



© LenDog64 · The Venice Passenger Port

The functioning of the Port of Venice relies on the support provided by the *Capitaneria di Porto*, of which the Coast Guard is the operational component since 1989 (including operating rooms, shipping services, air and underwater operating units, as well as coastal defense and port intervention units). The Coast Guard depends on the Ministry of Defense (as technical body) and on the Ministry of Infrastructure and Transport (as peripheral organ). It interacts also with other Ministries for its operational functioning, more specifically with the Ministry of Environment and Protection of the Territory and Sea and with the Ministry of Agriculture and Forestry.

The traffic control of both the maritime and the inland lagoon navigation are ruled by various Administrations: the Water Authority, the *Capitaneria di Porto* and the Municipality, each provided with appropriate Regulations and Orders.

Furthermore, the Italian Government has entrusted the coordination of the entire sector of the local lagoon navigation directly to the Province of Venice by means of specific regulations.

The administrative control of traffic flows, on the other hand, is divided among the Water Authority, the *Capitaneria di Porto* Coast Guard, the Port Authority and the Police, each with their own regulations under the coordination of the Province of Venice.

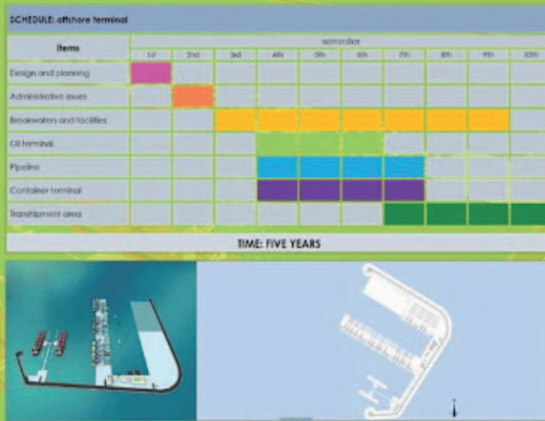
The functioning of the offshore deep-water platform will require a redefinition of the territorial boundaries of the Venice Port Authority, and once the MOSE flood defense system will be operational, it will also be necessary to reallocate the responsibilities among the various authorities in order to optimize the management of the maritime traffic flows.

### Critical perspectives

The rationing of tourist flows is one of the most important challenges to be addressed in the strategic plan: while on one hand it should impose limitations on tourism services, on the other hand it is a parameter to fully assess the opportunities for the economic growth of the city.

There is a unanimous request to bring order to the responsibilities of those who govern the lagoon traffic in all of its branches, as today they appear too fragmented. A major harmonization in the management would allow a more effective and smooth coordination.

## Offshore Terminal



> OPERATIONAL

© Venice Port Authority - Schedule for the construction of the Offshore Terminal

## Session 2

# Marghera industrial site

Porto Marghera is a port-industrial zone with about 14,000 employees and over 700 firms. The port accommodates over 4,000 ships a year, including 450,000 containers (TEU), and yearly handles about 26 million tons of goods.

Porto Marghera developed from the growth of the petrochemical industry to a progressive decline in the 1980s of state-owned firms in capital-intensive heavy industries. It has a complex production history which has also generated negative impacts on the environment, while employing thousands of people. The need to remedy these negative externalities has required considerable legislative and financial interventions, especially since the late 1990s. Today, the area falls within the Law No 426/1998 under "industrial areas and sites at high environmental risk" of national interest (SIN). The site has a total extension of about 5,800 hectares, including 3,100 hectares of land, 500 hectares of canals and 2,200 hectares of lagoon area.



© Vetto - View of the industrial area of Porto Marghera

Between 1965 and 2009 the workers' number decreased from 33,000 to 14,000 with profound changes in composition; hence large enterprises with over 500 employees have disappeared.

In December 2009, the industrial pole of Porto Marghera counted 758 companies with a total of 13,750 direct employees. The industrial "heart" of the area consisted of 90 companies, 50% of which operating in the mechanical sector employing 1,913 people, whereas the number of companies working in the chemical sector was reduced to 8, employing 977 people (7.1% of the total number of operators at Porto Marghera). Today, only 150 hectares out of a total of 600 occupied by petrochemical settlements are actually in use, with a significant decrease in employment density per hectare (1.6 operators/hectare).

In 2009, the "other" operating sectors included 676 firms with 8,750 employees operating in the trade, services and logistics industries, involving a significant 64% of the operators at Porto Marghera. This recent development is related to the job losses in the chemical and manufacturing industries. At Porto Marghera small size companies prevail (in 2009, 717 companies out of a total of 758 counted less than 50 employees); a totally opposite situation with respect to the years of maximum employment (1965-1970) in both economic dimension and composition.

Since more than a decade we can clearly observe:

- a decrease in the use of areas destined to industrial functions;
- an expansion of port operations and logistics, as well as business services;
- the complexity of the bureaucratic procedures for the reclamation and re-use of brownfield sites.

The closure with the past is evident, though part of the social forces does not want to admit it. The problem seems to necessitate a paradigm shift in industrial relations, not only defending jobs regardless of their economic sustainability, but requiring a different vision on possible strategic solutions to the crisis, a different way of managing a historical turning point, a radical break with the past.

In recent years, the activities of Porto Marghera have been reinforced by the presence of 200 companies, employing 2,000 people in the research, project planning and services sector. These enterprises are settled in the area of the Science and Technology Park, near the urban zone of Mestre and Marghera and the Venice waterfront, as part of a reconversion project of 35 hectares started in 1993 and of which 11 hectares have presently been implemented.

Some of the projects proposed for the revitalization of Porto Marghera can be included in the Green Economy: a "green economy conversion", compatible with the adjacent zone of Marghera, could be useful for a better integration of the area in the urban context and for its revival potential in order to attract new industries and/or services, by exploiting the advantageous position and the excellent maritime and land access infrastructures of the area.

While the safety of the industrial site as to the surrounding territory and lagoon has been guaranteed by a public intervention, it is now necessary to tackle the land remediation from the perspective of the investors. In fact, time and costs of the reclamation process are crucial in defining an authentic redevelopment plan for Porto Marghera.

The overall scarcely satisfactory results of the approach adopted so far for the remediation of the polluted areas necessitate an acceleration and simplification of the procedures. First of all, it is fundamental to develop a true project for the new Porto Marghera, by proceeding in an organic and integrated way and taking account of the future structure of the entire area and its function in relation to the metropolitan, regional and international territory.

The workshop offered the opportunity to reflect on the benefits of environmental remediation and requalification of contaminated industrial sites - and of Porto Marghera in particular - from the complementary perspectives of economic development and local approval. The site of national interest of Porto Marghera is a complex system which consists of

companies still operating on the site, dismissed areas and vacant or partially vacant zones. Porto Marghera is also one of the most costly contaminated sites of national interest in Italy: the Master Plan for the remediation of the site (2004) gave an estimate of €1.8 billion, against a public funding of about €75 million.

The cost-benefit analysis for remediation of contaminated sites is an important tool in support of environmental requalification processes, because it highlights the benefits against the use of significant financial resources, and is therefore instrumental for public decision-making. Whereas the direct and indirect costs of brownfield reclamation can easily be quantified, the economic evaluation of environmental and social benefits results more complex.



© iLenny - Abandoned factory at Porto Marghera

Empirical studies examining the case of Porto Marghera and other sites of national interest have estimated the value of intangible benefits, such as improved human health and environment, by using non-traditional economic evaluation methods. In fact, one of the most important benefits resulting from land reclamation is the reduction in pollution incidents that can affect the population living in polluted area surroundings, causing temporary and chronic health problems or even mortality in the worst cases. These evaluation studies quantify the economic value of a Statistical Life, that is to say what one would pay to achieve a small reduction in mortality risk, equivalent to €5.8 million, and the estimated value of a statistic case of cancer equivalent to €2.6 million.

Research on the redevelopment of reclaimed land has also demonstrated the preference of the population towards public uses, such as green parks and sports, recreation and social centers, and their scarce interest in productive, industrial or artisanal reuses, likely due to the potential negative externalities.

Generally speaking, the results confirm that the extent of the benefits resulting from the recovery of contaminated areas is superior to the remediation costs, and that environmental regeneration projects are strongly supported by the citizens for the improved environment, human health and life quality.

Another empirical research has given a better understanding of the vivid real estate market of Porto Marghera by estimating the impact of both environmental remediation and "permanent safety" interventions on the real estate value of industrial and commercial properties sold in the last 12 years. The results demonstrate that remediation carried out under the current regulations and successively certified by the Provincial Authorities constitutes an appreciation in the sale value, as opposed to a depreciated value of areas that have only been object of a "permanent safety" intervention which is probably due to a lack of security and to the investors' concern that they should account for ulterior environmental responsibilities.



© Waerfelu - Cruise ship under construction at the Porto Marghera shipyard

The economic regeneration of the industrial site of Porto Marghera is a very complex process that reflects high growth expectations with regard to a large (but not infinite) range of perspectives. This prospect has led to the stated willingness of the companies of the Venetian industrial system to allocate about €3.7 billion for new investments: a commitment that would be facilitated by the development of the metropolitan area and the special legislation for Venice, and that could simultaneously support the establishment of foreign investments and the ultimate strengthening of the new sectors, particularly those related to logistics and port activities.

The further development of the logistics sector in the context of global change is very significant for the future of Venice. Logistics is the prevailing activity of Porto Marghera: trade flows have reached an annual volume of about 450,000 containers (TEU), with a further growth potential related to

the high demand for logistics services by the entire Venetian mainland territory. Since the commercial port can aspire to a substantial trade growth taking advantage of global trends opportunities, it may be presumed that the industrial-related activities connected to the intra-Mediterranean trade and container traffic can parallelly develop in the adjacent area of the industrial site of Porto Marghera.

A group of entrepreneurs representing the principal industry sectors in the North-East indicate energy costs as the determining factor in the reconfiguration of the logistics networks. This will lead to a shortening of logistics chains and to their strategic relocation. The current global logistics model, based on the China market, will no longer exist: a spatial



redistribution system of the production and logistics platforms will develop at local level. The redistribution of activities based on the market trends will produce a shift of production platforms that will clearly tend to relocate. In this context the U.S., Chinese, European, Russian and Indian systems will represent the principal attraction poles.

At regional level, a relocation of production and distribution activities will be observed as a direct result of these phenomena: production and distribution will be located where the demand is, with a trend towards the regionalization of economies and logistics systems. At global level, specialization efficiency and competent use of existing resources will impose changes in the activities scenario. As a rule, the opportunities of the Venice area to regain industrial competitiveness in the logistics sector will increase.



© Patrick Clenet - Garbage collection by boat

This scenario will apply to the Veneto Region and all regional areas in Europe: the Mediterranean and Eastern Europe will be the primary production platforms for the spatial and functional reorganization of the networks. The consequent structural changes in shipping lines will give rise to a more dynamic development on the north-south axis, also in terms of growth potential of the trade relations between the ports. Venice and the Veneto Region at large possess an authentic development potential related to the trend of the maritime and terrestrial logistics flows, also at production level: this way Venice could assume the role of an important logistics and production hub connected to the Mediterranean and Eastern Europe. The challenge for Venice, therefore, is to adequately equip in order to respond to the new market developments.

An excellent example in our reflection on possible new functions for Porto Marghera is represented by the experience of Veritas.

VERITAS (Veneziana Energia Risorse Idriche Territorio Ambiente Servizi) is an exclusively public, "green economy" oriented company, established at the industrial site of Porto Marghera. Together with the Municipality of Venice, Veritas is committed to the completion of a local waste management "eco-district". The company provides waste management and integrated water cycle services. It is the first multi-utility of the Veneto region and one of the largest in Italy in terms of dimensions and turnover: it ranks eighth for integrated water services and fifth for environmental services, behind companies active in energy management and operating in more densely populated areas. The company is able to recycle the largest part of the

waste materials and holds a national record for the excellence reached in its activities.

It is to be emphasized that the waste management problems are directly associated with the increased tourist flows in Venice, hence highlighting the continuous interplay between the various issues addressed in this workshop. Waste production is a negative side effect of the constantly growing presence of tourists and the aggregate tourism industry.

Today, Veritas is able to respond in a satisfactory way and with great commitment to the needs of the city, converting the weak point of waste generation into an economic growth opportunity for the territory. The recycling rate currently reaches 50%, achieving an economic break-even point for paper collection and also a good level of economic coverage for the disposal of metals. An additional challenge would consist in extending the area of activity at regional level, considering that

a larger size of critical mass treated allows a more convenient distribution of fixed costs, thus generating major economic benefits in the waste recycling chain.

The historical centre of Venice with its 59,000 residents functions as a city of 500,000 inhabitants, which results in a per capita waste generation of 750 kg a year and very high levels of water consumption per capita. The management of the water purification system ranks among the best in Europe. Today the Veritas services company intends to develop into an effective territorial infrastructure aimed at the satisfactory processing of waste, bound to increase in the near future along with the tourist flows.

Furthermore, Veritas represents an example of green economy with proven expertise in management, relational and social skills and in the sensitization of the citizenship in resource consumption. This may facilitate a comparison with international actors interested in sustainable economic and environmentally respectful development.

### Critical perspectives

The crisis of Porto Marghera seems to need a radically new strategic vision. The strong institutional fragmentation and the heavy overlay of public bodies' responsibilities in the governance of the industrial area make it very difficult to attain such a new perspective.

A short-sighted contingent view seems to dominate the recent "Protocol of shared strategic lines for the rehabilitation and development of Porto Marghera" approved by the Region, the Province of Venice, the Venice Municipality, the industry associations Unindustria and Api as well as the CISL trade union, dating back to October 30, 2007. This document includes the following range of possible uses for the site: a fair center, a knowledge district, a hydrogen park, new power plants, activities related to the shipbuilding industry, yachting, naval-aviation production, logistics and ultimately the development of port activities as well as the environmental requalification with related monitoring.

The framework of the forthcoming New Special Law for Venice seeks to achieve the following important lines of action:

- guided disposal of the petrochemical complex;
- elimination of the oil tanker traffic from the Venice lagoon;
- completion of the land reclamation, also by means of project financing;
- assignment of a decisive role to private investors;
- diversification of investments;
- investment in expertise.

This new framework is somewhat more coherent than the one provided by the previous Protocol as it addresses some relevant needs for the development of Porto Marghera, yet it still lacks more assertive regulatory measures.

## Session 3

## VEGA Science Park and Innovation

Innovation develops in universities, in enterprises and science parks, but also within the sphere of relational dimensions of tacit knowledge, which characterizes innovation in medium-sized enterprises.

The topic of innovation and entrepreneurial creativity helps to identify interesting factors for stimulating innovative economic processes in Venice and its surrounding territory. The metropolitan area of Venice and the Veneto Region at large have shown to be inclined to accommodate new types of innovative creativity. The notion of creativity is used in a broad sense, compared to the concept of technological innovation, and assumes that there exist various forms of knowledge that contribute to the generation of value: this applies not only to research promoted by universities, but includes also design, style and communication research.

In the Veneto Region exists a dynamic form of creativity, a “diffused creativity” that can provide real economic growth opportunities in the most diverse creative processes and is able to transfer - as a result - the best creative research to the industry and to the market. At regional level, there are indeed companies that have developed highly competitive skills on the international market. These remain however very localized, since the connection between the successful experiences of innovative production companies, that operate independently in the region, and the cities - and the city of Venice in particular - is lacking.



© J\_uil\_ee · Ageing of the local population

It is therefore useful to assess the weak points Venice presents in this respect. The ageing population and the continuous population decline are the most evident weaknesses: Venice is rapidly moving toward a critical collapse of the urban functioning due to the lack of generational turnover. Opportunities to stimulate knowledge transfer and creative production by encouraging the presence of foreigners could help to invert the process, but there is poor evidence demonstrating this.

One idea to promote the relationship between the most successful innovative companies and the city of Venice could be to take advantage of the best available spaces, such as those assigned to the Biennale, for presenting large entrepreneurial projects to the most diverse international interlocutors. This way, Venice could become an extraordinary platform connecting the excellences present in the region with an international audience interested in the promotion of innovative business ideas. Two examples illustrate the key issue of innovation in

Venice, one promoted by the public administration and the other one on totally private initiative.

The first is the experience of the VEGA Science and Technology Park, a company in which public institutions hold about 50% of the shares. The VEGA Park includes 146 enterprises, primarily active in the research and development sectors dealing with innovation, employing about 1,800 people, 75% of which with a higher education at university level. In recent years 20 new companies have settled at VEGA, including the largest computer science company in Italy, and it has attracted about 200 young researchers.

Created to revitalize a disused area of the Porto Marghera industrial site, VEGA aims at investing in the high-growth potential of Information Communication Technology (ICT) and Green Energy and at transferring its own knowledge to the entire surrounding territory. In this framework, the Park supports small and medium-sized enterprises of the Veneto Region in the innovation process imposed by the economic scenario. VEGA makes use of many human and economic resources in the ICT sector, based on the evident impact of the new communication systems on the ability to create value innovation.

The information exchange among people, multiplied exponentially through Internet and social networks, offers unique opportunities to manage a large amount of data that are able to transfer knowledge and create real value to be used for innovating entrepreneurial solutions and ideas. In this perspective, VEGA encourages virtualization and changes in the work distribution, making use of technological tools that allow individual workers to be active at any time of day and at any physical distance from the company. VEGA has therefore supplied the entire park with 300 MegaBit optical fiber and has created a "Cloud Computing" experimental laboratory, networking the Park's companies and thus also the specific knowledge at their disposal. Relations between people create value and the most important tools used to cultivate these relationships within VEGA are "social networks".



© Nova Marghera spa - The Vega Park complex at Porto Marghera

The constant networking of knowledge as well as the development of new technologies and their implementation in the daily reality, have led to the creation of a building that can physically communicate with the external (for example as regards the needs for maintenance and energy consumption) and that can use nanotechnologies to optimize resource consumptions for its own energy sustainability. The objective of a prototype "smart" building is to test what can happen by networking a large amount of significant data that transfer value and knowledge, conceiving urban areas as "smart cities", i.e. places where there is a constant and significant transfer of knowledge not only among people but also between people and physical objects.

One of the strongest assets of the Science and Technology Park is the nanotechnology laboratory, which is currently



© Vega Parco Scientifico Tecnologico di Venezia - The nanofabrication facility laboratory at the VEGA Park

the largest in Italy and which focuses on the development of “green chemistry” and environmental sustainability. At Porto Marghera, the application of nanotechnology knowledge is currently being experimented on the purification of groundwater and the conversion of waste oil into eco-friendly fuel, projects which have already received important international recognitions and which are financially supported by VEGA and private partners.

One of the good practices of the Park is also the direct investment in innovative business ideas, providing young researchers with spaces and resources to test the feasibility of new projects, in exchange for a direct participation in new companies. This is a solution to the widespread difficulty of start-up financing, which slows down innovation development and production change both at local and regional level.

Another example of the debate on innovation is the successful experience of a totally private initiative: H-Farm, incubator for innovative startups at Treviso.

H-Farm’s core business is venture capital. With more than €9 million invested in 27 startups between 2005 and 2010, and with the goal of spending another €10 million by 2015 to support 30 new businesses with a high innovation rate, the company sees technology revolutions as powerful agents that redefine paradigms and growth patterns for the future of the world, as well as for the future of Venice and its surrounding territory.

The company believes that, in order to fully exploit the opportunities offered by contemporary technology and to ensure that they generate a process of real innovation in the economy, one must invest in human capital, technology and creative redesign, pushing innovation towards a greater environmental sustainability of the entire economic system. H-Farm has created a physical working place where young people involved in new business projects can constantly interact, confront new ideas and test the true feasibility of new businesses, with the aim of promoting the development of new enterprises with high innovation potential that respect the principles of environmental and economic sustainability. The incubator operates with a mentorship program and encourages active collaboration among workers, which implies not only physical “networking” but also the sharing of information using social networks.

The vision of the H-Farm incubator is now rewarded by their true ability to attract highly innovative professional profiles that contribute to the full economic viability of the company.

### Critical perspectives

The debate on innovation and creativity is correlated with the issue of sustainability, which is essential for all businesses to achieve their economic goals, not only with respect to environmental aspects but also in relation to the economic and social development. Important is also the assessment of the real growth potential of the city of Venice within the innovative and creative production process initiated in the surrounding territory.

Examining the dimension of the Venice city-region, which includes a total population of 2.6 million people distributed among the provinces of Venice, Padua and Treviso and including also the Venice lagoon and its 117 islands, the key issues that need to be tackled in order to facilitate innovation processes include: the development of infrastructural interconnections on the territory (mobility and road network), the improvement of the education level of workers as well as the development of a regional innovation system to attract foreign direct investment.

Local businesses, traditionally small to medium sized and disseminated throughout the region, need to be linked to university systems and research centers in order to develop new skills oriented towards technological innovations that will enable them to regain competitiveness and to raise their production value.

In recent years, and especially since 2000, the traditional sectors of activity show indeed a progressive loss of specialization and competitiveness, partially due to the phenomenon of delocalization of production activities resulting from the competition on the global market. At the same time, it seems that there has been a not so clear shift towards a specialization in the emerging growth sectors of Research and Development (R&D) and Information Communication Technology (ICT) which deserves closer attention. To this regard, the Veneto Region at large has made significant efforts: in the period 2003 - 2007 the volume of investment in the R&D sector has doubled from €365.4 million to €731.0 million: 54% of these resources were provided by the business world, 33% by the university system, while only 10% came from public governance, with a further 3% from non-profit organizations (data from the OECD - Organization for Economic Co-operation and Development).

There is a great need to stimulate venture capital, which to date has a very low incidence in the territory compared to other OECD regions. Investment in research and development is still modest and interactions between qualified workers, businesses, universities and research laboratories should be promoted through systematic investment in priority intervention sectors.

Another issue for reflection is the fact that the Veneto Region is committed to attain the objectives set out by the Lisbon Strategy, with a 2007-2013 operational program of €452 million approved by the EU: the third largest EU funding obtained in Italy and the sixth largest in Europe, with 42% of funds assigned to initiatives promoting innovation in the territory.

## Session 4

## Arsenale

The Arsenal of Venice can be observed under different perspectives in relation to its changing role over time. As one of the first major and highly specialized production centers prior to the Industrial Revolution, the Arsenale represented for centuries the instrument of the economic, military and political power of the Venetian Republic. The Arsenale no longer serves its original function, but the complex is a unique urban setting with elevated historical-cultural valence which incorporates also intangible assets. The Arsenale will be housing, for example, the maintenance activities of the MOSE flood defense system, a public investment of over €5 billion with a potential impact on the local manufacturing know-how.



© Ministry of Infrastructure and Transport-Venice Water Authority, concessionary  
Consorzio Venezia Nuova - Northern part of the Arsenale complex with the Tese della Novissima  
warehouses after restoration

The redevelopment of the Arsenale complex concerns the northern part of the site, the other areas being assigned for military use. The North Arsenale occupies a total surface of 250,000 square meters, including 60,000 square meters covered space, for a total volume of half a million cubic meters. The interventions to secure this area and to restore the historic buildings were funded by the State and carried out by the Venice Water Authority at a cost in excess of €140 million.

The Arsenale complex is entirely State owned. In recent years the use of specific areas has been granted to Thetis (an engineering and systems integrator company in environmental and ICT technologies), Consorzio Venezia Nuova (the executive agency of the Ministry for Infrastructure and Transport - Venice Water Authority for planning and implementing measures to safeguard Venice and its Lagoon, delegated by law to the State) and the Italian

National Research Council (CNR). The area assigned to Consorzio Venezia Nuova will accommodate the management and maintenance of the MOSE mobile barrier system, as well as the tidal forecast center and lagoon research activities to support the functioning of the MOSE.

Today Venice needs to decide on the future development of the area and the appropriate reuse of the spaces and the architectural patrimony. The objective is to re-establish the relevant role of the Arsenale in the life of the city as a resource for the community.

One of the most interesting proposals is the transformation of the Arsenale into a place for excellence in specialized scientific knowledge of the lagoon, which could take advantage of the undertakings already present in the area (Thetis, CNR, activities related to the MOSE) and have a significant role at a global scale. Such a choice would entail also an increase in the number of people working at the Arsenale, leading to a greater demand for services and thus contributing to the regeneration of the area.

Another idea proposes that the Venice Biennale, which occasionally uses spaces of the Arsenale for temporary exhibitions, would occupy these buildings on a permanent base and thus create the conditions to become an international platform for excellence in Venetian creativity.



© Martin Wippel · The Darsena Grande with the 19th century Armstrong-Mitchell crane and 16th century warehouses

Ca' Foscari University is defining some proposals for the use of the Arsenale that remunerate the efforts for the economic, social and cultural growth of the city and that fit into a broad strategic vision for further development. The proposals highlight how the functional redevelopment of the Arsenale can be achieved with private funding without need for public intervention. Ca' Foscari encourages the presence of the University at the Arsenale, especially of departments as Environmental Sciences that can best integrate with the already existing initiatives on site. On this basis, the University is ready to promote qualifying activities at the Arsenale such as basic education programmes in marine science and technology, which by means of a more advanced training level can lead to applied research and an active collaboration with CNR and Thetis.

Additional initiatives from the University include the creation of an international research center on climate change and the development of an entire sector active in this field, as well as the strengthening of cultural activities, for example by the establishment of restoration laboratories, which could create positive synergies with the Biennale.

It is worth noting that the presence of the University at the Arsenale would entail the provision of services to researchers, students and those living in the area, bringing a further contribution to the economic growth in the territory.

An important input on new uses for the available spaces at the Arsenale is provided by CORILA - Consortium for Coordination of Research Activities concerning the Venice Lagoon System, an association which includes public research institutions involved in lagoon studies: Ca' Foscari University, the University of Padua, the IUAV University, the National Research Council and the National Institute of Oceanography and Experimental Geophysics. The Consortium is examining the feasibility of creating a scientific pole of excellence at the Arsenale, which would have a major positive impact on the entire city. Such a project proposal needs to be considered within the framework of the Lisbon Strategy, whereby the European Union



and all its Member States support the free circulation of researchers, knowledge and technology, in view of becoming by 2020 the most competitive and dynamic knowledge-based economy in the world. The "European Research Area" plays a key role in the growth of research, innovation and education, which are the driving forces for international competitiveness and sustainable development in Europe.

Venice has an important function in the European Research Area which consents to enhance the marine research that has been and continues to be done in the Venice area with a European perspective. The European Union fully promotes an integrated maritime policy that strengthens the links between economic development, scientific research, technology & innovation and life quality in coastal and peripheral regions, and that raises awareness about the economic importance of the maritime sector, the marine environment and the coastal regions in Europe. In response to the European Programs, the city can make a substantial contribution to the development of marine knowledge as facilitator of knowledge integration. In this framework, Venice and the Arsenale could become the base of the World Association of Marine Stations (WAMS), a platform for marine knowledge exchange which the Intergovernmental Oceanographic Commission of UNESCO seeks to promote with the aim of creating a network of marine stations and institutes across the world.

Significant is also the proposal from CORILA to establish a "VENICESPACE" at the Arsenale: a center of excellence for the European GNSS - Global Navigation Satellite Systems, dedicated to earth observations and marine research. CORILA as member of NEREUS, the Network of European Regions Using Space Technologies, is involved in the effective application of space technologies for the benefit of regions and their citizens.

The creation of a scientific pole at the Arsenale such as the "VENICESPACE" would serve to develop important links between researchers and policymakers, involving both regional and interregional authorities, and would offer possible solutions to specific governance problems related to the territorial and environmental dimension of the city of Venice. This initiative originates from the consideration that scientific research in Venice requires a strong coordination effort.



© moroccanmary - Biennale Exhibition at the Arsenale

The planning for the redevelopment of the Arsenale could take account of the choices that have been made so far, such as the activities of the Biennale which enhance the high cultural value of the site and the presence of Thetis which attracts initiatives in the scientific research sector. The choice of the Municipality to address the rehabilitation of the Arsenale within the overall framework of the regeneration of the city is of fundamental importance. But the Arsenale should also be conceived as an integral part of Venice, not separated from the city, but a space open to the community that has a key role in the enrichment and cultural valorization of the city. A critical issue still not solved is the Arsenal's inaccessibility to the city, which to date has not yet found successful solutions due to the lack of a true shared vision on the reutilization of the site. The historical complex of the Arsenale should be re-integrated into the urban

system and should be re-opened to the citizenship so that the city can retake possession of an essential element of its cultural identity.

The Arsenale has a major governance problem related to the regeneration of the human and cultural heritage of the site and to the true feasibility of the project proposals. To this end UNESCO could help the local authorities identify a series of actions useful in defining an optimal development plan for the territory, with an approach that takes account of the specific characteristics of the site within the overall urban regeneration strategy.

Venice as World Heritage Site can take advantage of a series of undertakings aimed at the protection of its cultural and natural heritage, which are both intrinsically linked to the identity of Venice and stretch over an area of 70,000 hectares including lagoon and mainland. The question that arises is how to intervene on such a broad basis, which involves many authorities and suffers from fragmented decision-making, seeking an integrated approach between the safeguarding of the

historic site and the innovation process in the Venetian area. The New Special Law for Venice plays an important role in the identification and assignment of competencies and key responsibilities that can lead to the definition of specific action plans for the territory at large, and for the reutilization of the Arsenale in particular.

### **Critical perspectives**

The requalification of the Arsenale requires a true sharing of strategic choices between all those directly involved in the rehabilitation of this historical part of Venice.

There is a need to understand how the Arsenal's re-opening to the citizenship can be addressed, since this would require the provision of a set of services and the installation of complex structures in the revitalized area.

Examining the project proposals made so far, one should consider that an increased frequentation of the site would entail also an increase in the cost effectiveness of installing appropriate services at the Arsenale. This would trigger off a virtuous circle by which the re-opening of the Arsenale complex would lead to the supply of new services and, as a result, to the revival of the area.

## Conclusions

### Key Point: Venice Brand

Venice is considered as a unique brand that needs to develop an adequate critical mass of economic, institutional and social resources, in order to exploit its potentials and to face the global market. This perception refers to the Venice metropolitan area, which encompasses not only the historical city and its lagoon but also the surrounding local and regional territories on the mainland.

The issue of creating a metropolitan city generates opposing viewpoints, supporting on one side the good practices of the major metropolitan cities worldwide and emphasizing on the other side the specific cultural and social characteristics of Venice, which can rely on its own strength to face the challenges of the global market by taking full advantage of its unique identity as World Heritage Site and its strong growth potentials such as those related to the port. In the second perspective, Venice should focus on the ability to attract high levels of creative human capital, which together with staff training is one of the fields that are being developed in the higher education sector, involving companies and institutions present in the territory.

### Venice: “Genius Loci”

Venice’s unique identity as a World Heritage Site is a focal point for each reflection and decision-making on the future socio-economic development of the city. The strategic planning for the future of the city should seek effective solutions that guarantee the true feasibility of the development alternatives. One of the major problems which need to be addressed is the establishment of a comprehensive urban planning system that incorporates the entire strategic management process under one single framework and takes account of the essential elements characterizing the territory.



© ezio man - The northern lagoon seen from the bell tower on the island of Torcello

Useful to guide the strategic choices for the city are the principles of the UNESCO World Heritage Convention aimed at ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage of the Site and at encouraging State parties to adopt measures which give this heritage a function in the day-to-day life of the community.

Venice is therefore expected to make a proposal that adequately meets the requirements of both heritage protection and innovation development, based upon a core set of values in which the city’s identity can be recognized.

It is evident that the Management Plan for the World Heritage Site of Venice has an urgent need of a synthesis “system” for urban planning, and in particular for integrated development of the entire lagoon-land territory. The recent UNESCO Recommendations on Historic Urban Landscape give important

indications to determine the specificity of the complex World Heritage Site of Venice, including lagoon, islands and mainland. This specificity requires a verification of the Site’s “statement of conservation” that differentiates the natural values from

the historical and architectural ones, and hence also a revision of the Site's "statement of outstanding universal value" that takes account of the four natural criteria, beyond the six cultural criteria currently attributed to Venice. In this redefinition of the site, the Management Plan for Venice will encompass the municipalities strictly located within the perimeter of the Heritage Site (Chioggia, Codevigo, Campagna Lupia, Mira, Quarto d'Altino, Musile di Piave, Cavallino-Treporti, Jesolo and Venice), determining the buffer zone - not yet identified - and its scope of intervention.

The Management System Plan for the World Heritage Site of Venice and its Lagoon is an essential tool towards effective coordination between institutions, local authorities, associations, citizens and users. Better coordinated governance would guarantee, on one hand, to preserve the specificity of this unique site and, on the other hand, to introduce innovations for a sustainable development of the territory and the local community. This Management System Plan should therefore provide a framework that ensures an efficient and smooth "governance" recognized by all public and private entities - not only situated within the perimeter of the UNESCO World Heritage Site but also in the forthcoming buffer zone - and that includes specific monitoring indicators for the natural heritage.

The forthcoming proposal for the redevelopment of the Arsenale may constitute an example of how conservation can represent an opportunity for modern use of cultural heritage, so that Venice's unique identity can be handed down to future generations and be preserved over the centuries.



© dalbera - The Gaggiandre dry docks at the Arsenale, attributed to Jacopo Sansovino (16th century)

## Annex 1: Agenda

### Day 1 - Tuesday 4 October 2011

09:00 - 09:15 Registration of participants

09:15 - 10:30

Opening session:

Engelbert Ruoss, Director, UNESCO Venice Office

*The Future of Venice and its Lagoon in the context of Global Change*

Bruno Bernardi, President, COSES

*A new framework to design the future of Venice and its Lagoon*

Jan van der Borg, Ca' Foscari University, Venice

*Briefing on the third thematic workshop "Culture and Development in Venice" (June 2011)*

Donata Favaro, University of Padua

*Growth opportunities for the Venetian area*

### Session 1. The Port of Venice

10:30 - 13:00

*Moderator:*

Bruno Bernardi, President, COSES

Paolo Costa, President, Venice Port Authority

*Venice offshore terminal, more depth for the hinterland*

Ambra Dina, Director, Strategic Planning Department, Municipality of Venice

*The Port of Venice in the Strategic Plan and the Urban Master Plan*

Claudio Mollica, Chief Technical and Administrative Unit, Port of Venice

*The Role of the "Capitaneria di Porto-Guardia Costiera" in the Venice Lagoon*

13:00 - 14:00

*Lunch break*

### Session 2. Marghera Industrial Site

14:00 - 16:00

*Moderator:*

Mario Scalet, Head of Science Unit, UNESCO Venice Office

Stefania Tonin, IUAV University, Venice

*The economic valuation of contaminated sites' environmental remediation*

Francesco Miggiani, Managing Director, Unindustria, Venice

*The economic growth potential of Porto Marghera: social issues and strategic perspectives*

16:00 - 16:15

*Coffee break*

Background Session. Challenges from new world economic scenarios

- 16:15 - 18:00     Ignazio Musu, Ca' Foscari University, Venice  
*New trends in world trade specialization*
- Andrea Razzini, Veritas SpA, Venice  
*Logistics development and new rules of governance in a regional perspective*
- 20:00                *Social Dinner*

Day 2 - Wednesday 5 October 2011

Session 3. VEGA Science Park and Innovation

- 09:15 - 11:00     *Moderator:*  
Michele Vianello, Director Vega ST Park, Venice
- Maurizio Rossi, H-Farm SpA, Treviso  
*The drivers of an incubator of innovative start-ups: how it does matter for the territory*
- Stefano Micelli, Venice International University and Ca' Foscari University  
*Creativity as a source for the local competitiveness*
- 11:00 - 11:15     *Coffee break*

Session 4. Arsenale

- 11:15 - 13:00     *Moderator:*  
Francesco Indovina, IUAV University, Venice
- Carlo Carraro, Rector, Ca' Foscari University  
*Urban regeneration, much more than an industrial archaeology recovery project*
- Pierpaolo Campostrini, CORILA, Venice  
*The Science Pole at the Arsenale, a European and international perspective*
- Roberto D'Agostino, President, Arsenale di Venezia SpA  
*A competing view of the Arsenal's urban regeneration*
- Maurizio Di Stefano, President, ICOMOS Italia  
*Cultural Heritage management to ignite new urban functions: successful evidence from UNESCO sites*
- 13:00 - 14:00     *Lunch break*

Background Session. Challenges from new world economic scenarios

- 14:00 - 18:00     Marco Mazzarino, IUAV University, Venice  
*Strategic scenarios of global logistics: local and regional impacts*
- Bruno Bernardi and Mario Scalet  
*Wrap-up and Conclusion of the Workshop*

## Annex 2: List of Invited Speakers

<b>Bruno BERNARDI</b>	President, COSES – Consortium for Research and Educational Training, Venice; Associate Professor of Economics and Management, Ca' Foscari University, Venice
<b>Pierpaolo CAMPOSTRINI</b>	Managing Director, CORILA – Consortium for Coordination of Research Activities concerning the Venice Lagoon System, Venice
<b>Carlo CARRARO</b>	Rector, Ca' Foscari University, Venice
<b>Paolo COSTA</b>	President, Venice Port Authority
<b>Roberto D'AGOSTINO</b>	President, Arsenale di Venezia SpA
<b>Ambra DINA</b>	Director, Strategic Planning Department, Municipality of Venice
<b>Maurizio DI STEFANO</b>	President, ICOMOS Italia – International Council on Monuments and Sites, Comitato Nazionale Italiano
<b>Donata FAVARO</b>	Associate Professor of Economics, Faculty of Political Sciences, University of Padua
<b>Francesco INDOVINA</b>	Lecturer, Faculty of Urban and Regional Planning, IUAV University, Venice
<b>Marco MAZZARINO</b>	Associate Professor of Applied Economics, IUAV University, Venice
<b>Stefano MICELLI</b>	Dean, Venice International University; Professor of Economics and Company Management, Ca' Foscari University, Venice
<b>Francesco MIGGIANI</b>	Managing Director, Unindustria, Venice
<b>Claudio MOLLICA</b>	Captain, Chief Technical and Administrative Unit of the Port of Venice
<b>Ignazio MUSU</b>	President, VIU-TEN Center – Venice International University Thematic Environmental Networks Center; Professor of Economics and Environmental Economics, Ca' Foscari University, Venice
<b>Andrea RAZZINI</b>	Managing Director, VERITAS SpA, Venice
<b>Maurizio ROSSI</b>	Board of Directors, H-Farm SpA, Treviso
<b>Stefania TONIN</b>	Researcher, Faculty of Urban and Regional Planning, IUAV University, Venice
<b>Jan VAN DER BORG</b>	Associate Professor of Economics of Tourism, Ca' Foscari University, Venice
<b>Michele VIANELLO</b>	Director General, VEGA – VEnice GATeway for Science and Technology
<b>Daniela Veneri</b>	<i>Rapporteur</i>



Luca Carlevarijs. The Molo with the Doge's Palace. ca. 1690-1720



© Forrestn - Recent view of the Molo with the Doge's Palace







# THE FUTURE OF VENICE

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AND ITS LAGOON IN THE CONTEXT OF GLOBAL CHANGE

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Photo Canaletto, View of the entrance to the Arsenal, ca. 1732



United Nations  
Educational, Scientific and  
Cultural Organization

Venice Office



The urban ecosystem of Venice and its Lagoon is among the most studied urban and environmental systems in the world. Acting as neutral broker and facilitator, UNESCO Venice Office has mobilized expertise in the interdisciplinary fields to identify and discuss the scientific, environmental, cultural and socio-economic challenges faced by the World Heritage Site of Venice and its Lagoon in the context of global change.

This report presents a summary of the results and discussions from the fourth in a series of four thematic workshops that were held to gather the necessary expert inputs needed to evaluate the current situation of Venice and its Lagoon and to contribute to a shared sustainable vision for its future. The socio-economic development of Venice and changes in the city's population, the transportation, industry, trade, services and tourism in the Lagoon, as well as in the surrounding territory, are all densely interlinked. The workshop report *The Impact of Global Change on the Socio-economic Development of Venice* provides sound insight as to some of the potential consequences, both positive and negative, in trying to balance the above aspects and serves as a source of guidance for the local decision-making processes necessary for safeguarding Venice and its Lagoon.

The results of the thematic workshops will be used by UNESCO to facilitate the vision, strategy and management plan for Venice and its Lagoon, and to prepare in collaboration with the local authorities a follow-up report to the one already elaborated by UNESCO in 1969 after the devastating *acqua alta* of 1966.



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