Venice, Italy

Local progress report on the implementation of the 10 Essentials for Making Cities Resilient (First Cycle)

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Essential 1

Put in place organization and coordination to understand and reduce disaster risk, based on participation of citizen groups and civil society. Build local alliances. Ensure that all departments understand their role to disaster risk reduction and preparedness.

How well are local organizations (including local government) equipped with capacities (knowledge, experience, official mandate) for disaster risk reduction and climate change adaptation?

Level of Progress achieved: 5

Description of Progress & Achievements:

Venice has a large and active network of actors dealing with DRR and CCA, including public administrations at all levels, civil protection actors, scientific institutions and NGOs. The Municipality of Venice is running a Tidal Forecasting and Early Warning Centre (IPCSM) with a dedicated specialized personnel active 24h/365 days. This institution is responsible for the monitoring, forecasting and alerting procedure in case of flooding tides. An office of the Public Works Department of the Municipality is in charge of works against the flood risk on the mainland (in coordination with the Veneto Region and the managing authorities of water resources). The municipal Civil Protection of Venice can count on a dedicated local office with a Councilor referring to the Major. This office fully integrates the national Civil Protection System that, according to the principle of subsidiarity, foresees that local, regional and national authorities take charge of some operations. This Civil Protection System brings together actors dedicated to the DRR and CCA including the National Fire-watchers' Corps, the regional weather forecast department (part of the Regional Agency for Environmental Prevention and Protection). In addition, these offices can count on the cooperation of citizen volunteers, well organized and regularly trained; in particular, a special group of volunteers was established in 1995 for the protection of cultural assets in case of disasters. This group collaborates with the authorities in charge for the conservation of cultural heritage. The national Ministry for Infrastructure and Transport has a local branch in Venice, the Venice Water Authority. This national public administration is responsible for the activities to safeguard Venice and its lagoon. The mobile tidal barriers system (MOSE) is part of a General Plan of Interventions to safeguard Venice and the lagoon started in 1987 by the Venice Water Authority through its concessionary Consorzio Venezia Nuova. The richness of the Venice organization in DRR comes also from the research system. In Venice there are several State universities, public and research centres. The Consortium for Managing Research Activities in the Venice Lagoon (CORILA), puts together the scientific activities large part of which are useful for Adaption and DRR. CORILA is an

association between the University Ca' Foscari of Venice, the University Iuav of Venice, the University of Padua, the Italy's National Research Council -CNR and the National Institute of Oceanography and Experimental Geophysic - OGS.It is an independent institution overseen by the Ministry of Education, Universities and research. Are also active on these matters and based in our city other relevant institutions such as Unesco Office in Venice, Fondazione Eni Enrico Mattei - FEEM (a nonprofit research institution devoted to the study of sustainable development), the Euro-Mediterranean Centre on Climate Change - CMMC (a research centre on climate science and policy, also hosting the IPCC focal point for Italy).

To what extent do partnerships exist between communities, private sector and local authorities to reduce risk?

Level of Progress achieved: 5

Description of Progress & Achievements:

The Civil Protection works closely with citizens to tackle emergencies: the performances required are guaranteed through the network of volunteers (equipped and trained by the local public authorities); for special cases (such as for industrial accidents) the involvement of citizens directly concerns the inhabitants of the areas at risk. In some cases of extreme weather events it is required the cooperation of private subjects for the shelter of vulnerable people (shopping centers refrigerated for urban heat island; railway stations for exceptional frost). According to the EU “Flood” Directive 2007/60/EC, the North Adriatic Basin Authority began the construction of flood risk maps involving citizens and working closely with the committees of the victims of the recent floods. The capability of an urban area to cope with disasters is mainly based on the ability of each citizen to equip itself (and its properties) with micro protection measures: in the case of Venice, many restructuring measures for buildings (house-gates for high tide, containment basins, arise of electrical systems) were financed by the State, through the Special Law for Venice. Specific calls has been launched by the Municipality in order to fund projects of building restoration. These measures together with the flooding early warning system implemented by the municipality, through the IPCSM Center, are able to trigger a virtuous behavior of citizens. Regarding the great works of safeguarding of Venice and its Lagoon, the State uses a consortium of private companies (Consorzio Venezia Nuova) that is in charge for developing and implementing projects to protect Venice against sea storms and to safeguard the lagoon ecosystem environment. This system represents an example of partnership between private sector and public authorities: the State maintains the responsibility of planning the general program and super-visioning the interventions, while the private companies implement them.

How much does the local government support vulnerable local communities (particularly women, elderly, infirmed, children) to actively participate in risk reduction decision-making, policy making, planning and implementation processes?

Level of Progress achieved: 3

Description of Progress & Achievements:

There are no programs that concern a specific involvement of the listed categories. However there are many examples of citizens consultations. The approval procedures of the urban planning instruments provide stages for public discussion and debate with citizens. The preparation of the Sustainable Energy Action Plan (SEAP) of the Covenant of Mayors has seen the successful involvement of local stakeholders but failed to involve the communities of private citizens. The City of Venice, on its own initiative, established a “council for the environment”, constituted by several representatives of associations, having an active role in the environmental protection of the city.. This Council has the purpose to share environmental policies of the local administration.

To what extent does the local government participate in the national DRR planning?

Level of Progress achieved: 4

Description of Progress & Achievements:

A specific Committee for the Safeguarding of Venice, chaired by the Prime Minister, includes many Ministries, the President of the Region and the Mayor of Venice,it convenes at least once per year. In fact, the safeguard of Venice has been declared of prominent national interest by an Italian State Law in 1973, since then the different levels of the public administrations cooperate efficiently and the municipality participates, at the same level of the central state offices, in the decisions regarding the significant funds dedicated to the city for disasters risk reduction. The municipality participates to the National Civil Protection system with a dedicated office. The planning process to deal with emergencies provides guidelines issued by the central level (Region) that are implemented at peripheral level (top-down). Then, the Municipal Emergency plans are summarized by the plans of the super ordinate

territorial levels, first provincial then regional levels (bottom-up). Venice, as the role model city of the "Making cities resilient campaign" for the protection of the cultural heritage, has collaborated with the UNISDR to organize in 2011 the event "Building Resilience to Disasters Cities: Protecting Cultural Heritage and Adapting to Climate Change ". This conference had the objective to encourage the exchange of experiences and best practices of cities committed to reducing risks from disasters. The mayors that attended the Conference adopted a "Venice Declaration on Building Resilience at the Local Level towards Protected Cultural Heritage and Climate Change Adaptation Strategies." The Italian Ministry for the Environment, land and sea has the responsibility for the establishment and preparation of the National Strategy for Adaptation to climate change. The city is involved in the fact-finding phase of the process to set up this national strategy.

Essential 2

Assign a budget for disaster risk reduction and provide incentives for homeowners, low-income families, communities, businesses and public sector to invest in reducing the risks they face.

How far does the local government have access to adequate financial resources to carry out risk reduction activities?

Level of Progress achieved: 3

Description of Progress & Achievements:

The economic crisis is having a deep impact on local governance. In Italy the resources of local authorities has been affected by both the diminishing of tax revenues and governmental transfers from national level. On the basis of the National Special Law for Venice, dedicated national funds have been committed during the last 30 years for financing the structural measures of safeguarding of the lagoon as well as the maintenance activities that have a direct impact on urban risk reduction. The Special Law financed significant safeguarding measures such as: the morphological restoration of the Lagoon with the aim to re-equilibrate the capacity of the ecosystem, the restoration of sea-walls, the defence of Venice littoral through the reconstruction of the natural barriers from the sea and, finally, the infrastructure named MOSE (Mobile Tidal Barrier System). Among the maintenance activities financed by the Special Law, the seabed excavation of channels (for the navigation of boats, including emergency boats such as hydro-ambulances, fire boats, etc. ..), the pavements raising, the restoration of underground services and other works of urban maintenance. The funds provided by the Special Law for Venice are in the range of 10 billion Euro already spent since 1984. In the recent years, the funds have been almost completely absorbed by the construction of the MOSE system, and the urban maintenance works have been drastically reduced. Of the overall 1.2135 billion Euro estimated in 1994 necessary for urban maintenance, to date 461.3 million have been funded and 752.3 million are lacking. To ensure the physical survival of the city over the next 20 years, an annual funding of approximately € 47 million has been estimated. In 2011, the funding was only € 4.5 million and during 2013 is € 2.4 million. The conclusion of the MOSE has been postponed from 2014 to 2016, due to the delay in receiving State money, too. The Municipality is rising the political pressure on the central govern for having the promised funds for the urban maintenance of Venice and for speeding up the conclusion of MOSE. In the last few years, substantial funds were spent for DRR: 1,3 million Euro to realize the alert system for industrial accidents, the fire protection network in the historic city costed until now € 35 million and its completion would need further € 20 million. When fully operational, the maintenance will cost € 1 million per

year. In addition to the communication carried out through the normal channels (website, press releases), there are some special tools that cost to the City some tens of k€ a year: SMS alert for exceptional high tides, for flood risk, variable message panels.

To what degree does the local government allocate sufficient financial resources to carry out DRR activities, including effective disaster response and recovery?

Level of Progress achieved: 4

Description of Progress & Achievements:

Within the limits described above, the municipality is committed to providing the full range of services of its policy of risk reduction. Despite the current financial crisis the activities supported by the Municipality, in cooperation with other national authorities, are: information, forecasting and early warning, routine urban maintenance, implementation of infrastructure, emergency interventions, compensation, prevention. To give some examples, the municipality has spent in 2012 € 4.24 millions for works of hydraulic protection, 3.3 millions for safety of school buildings, 13.5 millions for the public anti fire network. The Tidal Center (ICPSM) has been funded with € 500,000 investments in addition to the running costs.

What is the scope of financial services (e.g. saving and credit schemes, macro and micro-insurance) available to vulnerable and marginalised households for pre- disaster times?

Level of Progress achieved: 2

Description of Progress & Achievements:

There are no special financial services for the prevention of disasters. The only exception is represented by the tax relief for energy saving interventions (tax deduction of 55% of expenditures, in ten years), and for house restoration (tax deduction up to 50% of expenditures, in ten years), both managed at national level. They barely apply to marginalized situations.

To what extent are micro finance, cash aid, soft loans, lone guarantees etc available to affected households after disasters to restart livelihoods?

Level of Progress achieved: 2

Description of Progress & Achievements:

The compensations, the only proposed financial formula, are usually comprehensive, even if with processes of a certain complexity; they are determined at the level of central government, then managed locally. For the 2007 flood has been distributed 18.7 milions for damage reimbursement (4.7 from the municipality budget, the rest from the State). This model is no longer considered sustainable, so that, at the national level, political authorities are reflecting about the introduction of obligatory (and regulated) forms of insurance to deal with natural disasters.

How well established are economic incentives for investing in disaster risk reduction for households and businesses (e.g. reduced insurance premiums for households, tax holidays for businesses)?

Level of Progress achieved: 2

Description of Progress & Achievements:

There are few economic incentives for the risk prevention (tax holydays are sometimes foresees only after a disaster). At the local level, in 2012, there has been only contributions (up to € 5,000 per company) provided by the Chamber of Commerce for the prevention of earthquake and fire. A small incentive is directed to farms by Rural Development Plan (a Regional initiative) for the hydraulic protection of the territory

To what extent do local business associations, such as chambers of commerce and similar, support efforts of small enterprises for business continuity during and after disasters?

Level of Progress achieved: 3

Description of Progress & Achievements:

Enterprise associations and Chambers of Commerce are the usual stakeholders that manage the aids to private enterprises. The type and amount of aid is determined from time to time when the disaster occurs.

Essential 3

Maintain up-to-date data on hazards and vulnerabilities, prepare risk assessments and use these as the basis for urban development plans and decisions. Ensure that this information and the plans for your city's resilience are readily available to the public and fully discussed with them.

To what degree does the local government conducted thorough disaster risk assessments for key vulnerable development sectors in your local authority?

Level of Progress achieved: 5

Description of Progress & Achievements:

The City of Venice adopted a Civil Protection Plan for emergency prevention and management. The Plan is published on the official website of the city and information campaigns are carried out in order to make relevant information available to citizens, giving particular attention to students of schools exposed to flooding, industrial and domestic risks. According to this Plan the City is responsible to: - Identify the main risks within the municipal area - Propose measures for risk prevention and mitigation of damage caused - Establish procedures for emergency management The risks analyzed are divided into predictable and unpredictable. The predictable risks are: - Exceptional snowfalls and frosts - Storms and Tornadoes - Floods and storms in coastal areas - Heat waves - Hydraulic risk; the forecasting and warning of exceptional high tides are managed by Tidal Forecasting and Early Warning Centre of the Venice Municipality (ICPSM). Unpredictable risks are: (mainly caused by human activities, with the exception of earthquakes): - Major accident of industrial origin - Incident from hazardous substances transport - Evacuation of the islands - Electric blackOut - Leakage from gas pipeline - Fire - Mass panic - Seismic events - Drinking water risk - Block of trans-lagoon bridges

Reference links:
> City Protection Plan for emergency
http://www.comune.venezia.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/6197

To what extent are these risk assessments regularly updated, e.g. annually or on a bi-annual basis?

Level of Progress achieved: 4

Description of Progress & Achievements:

The legislation provides that the Emergency Plan has to be revised every two years. The updating of the procedures with respect to new realizations and transformations of the territory (sensitive sites, strategic buildings, roads, urbanization) is an ongoing task of the civil protection office.

How regularly does the local government communicate to the community, information on local hazard trends and risk reduction measures (e.g. using a Risk Communications Plan) including early warnings of likely hazard impact?

Level of Progress achieved: 5

Description of Progress & Achievements:

The Risk Communication Plan is included in the Emergency Plan. The way in which the communication procedures are developed depends on the different types of risk. The ICPSM provides daily services informing citizens about the time forecast through the ICPSM website; an automatic answer device and a SMS service are also available. Weather forecasts are daily communicated to control extreme events; the Regional Meteorological Centre (ARPAV) are in charge of forecasting intense meteorological conditions and the City of Venice published these information on the institutional web-site Concerning the industrial risk, the Municipality of Venice produced (in 2004, 2009 and 2012) brochures on risk information to address the actions of persons in charge of the factory.

Reference links:
> ICPSM - Tidal Forecasting and Early Warning Centre
http://www.comune.venezia.it/flex/cm/pages/ServeBLOB.php/L/EN/IDPagina/1748?515559a17f291

How well are local government risk assessments linked to, and supportive of, risk assessments from neighbouring local authorities and state or provincial government risk management plans?

Level of Progress achieved: 5

Description of Progress & Achievements:

The National Civil Protection is articulated in a complex system that includes local and central administrations such as municipalities, provinces, regions and ministries. Therefore the municipal emergency plans are shared and integrated into the Civil Protection system. The flood event occurred in September 2007 in the area around Venice had a high impact, causing damages of tens millions in the urban areas of this region. In that occasion a special commissioner has been appointed by the national level in order to address the emergency management. The special commissioner carried out its activity in cooperation with the local administrations and bodies: in particular, the technical supervision has been coordinated with the Drainage Consortium, which has the territorial jurisdiction over the basin of the water system. The interventions on the Venice Lagoon require the integration of different administrative levels of governance; the Special Law for Venice assigned specific competences to different administrative levels, including the Italian Government through the local branch of the Venice Water Authority (MAV), the Veneto Region and the Municipalities.

How well are disaster risk assessments incorporated into all relevant local development planning on a consistent basis?

Level of Progress achieved: 4

Description of Progress & Achievements:

The urban planning collects, as required by law and derived from a historical experience of the local officials, all constraints and assessments produced by competent subjects and by a particularly rich system, such as the Venetian system, regarding scientific research and operational capacity. One deficiency in the system is the persistent overlapping of competences.

Essential 4

Invest in and maintain critical infrastructure that reduces risk, such as flood drainage, adjusted where needed to cope with climate change.

How far do land use policies and planning regulations for housing and development infrastructure take current and projected disaster risk (including climate related risks) into account?

Level of Progress achieved: 4

Housing	Yes
Communication	No
Transportation	Yes
Energy	Yes

Description of Progress & Achievements:

housing The Urban-Structure Plan (Piano di Assetto del Territorio, see essential 6.24) provides the minimum requirements for buildings located in vulnerable areas. The building code defines minimum quotas for the ground floors of buildings located in the Venice islands in order to protect them from high tides. The special commissioner, appointed following the severe floods of 2007, has issued a series of ordinances that affect the rules of planning and evaluation of territorial development projects: the most important principle introduced is the "assessment of hydraulic invariance" required for all projects and implementation plans to be carried out. This evaluation concerns the disposal capacity of the entire area of expertise and not only to the single intervention.] transportation Urban transports, and related infrastructure shall be decided in the Urban Mobility Plan (PUMAV) , according to the Urban Structure Plan PAT (all the transformations of the territory is decided within the PAT). Decisions concerning infrastructures that have a supra-local interest, shall be decided by national government, in agreement with the municipal authority. It is also important to take into consideration that the Urban Mobility Plan of City of Venice (PUMAV) is designed on the metropolitan scale. energy Energy policies are decided by higher levels of government (except when a territorial transformation is required for which there are forms of negotiation with the municipal authority). In recent years, forms of micro-generation energy have been incentivized (especially great success had the

solar energy; this policy was established for emissions reduction purpose) . These new form of energy will be also useful in scenarios of disasters that may affect the distribution infrastructure.

How adequately are critical public facilities and infrastructure located in high risk areas assessed for all hazard risks and safety?

Level of Progress achieved: 4

Description of Progress & Achievements:

The Civil Protection Plan identifies the strategic buildings and infrastructure, the significant buildings, the sensitive and tactic structures and it provides for the procedures to safeguard them in case of disasters. In the city historic centre, some evident constraints exist. Nevertheless, the access by boat somehow is able to guarantee an access in almost any condition. For islands far from the land, integration with helicopters are foreseen.

How adequate are the measures that are being undertaken to protect critical public facilities and infrastructure from damage during disasters?

Level of Progress achieved: 4

Description of Progress & Achievements:

The Italian National law requires, for some categories of buildings, a certificate of fire prevention (CPI), depending on the activity currently performed and the compliance with anti seismic measures, depending on the location area. All of the critical public facilities and infrastructure (no matter for their location) have to obtain these permissions; in some cases these documents are released with derogations or prescriptions for improvement. A comprehensive campaign of buildings improvement would be one of the major public works that the State should start if funds are available.

Essential 5

Assess the safety of all schools and health facilities and upgrade these as necessary.

To what extent have local schools, hospitals and health facilities received special attention for "all hazard" risk assessments in your local authority?

Level of Progress achieved: 4

Schools	Yes
Hospitals/ health facilities	Yes

Description of Progress & Achievements:

The risk assessments for local schools, hospitals and health facilities are fully carried out in the Emergency Plan.

How safe are all main schools, hospitals and health facilities from disasters so that they have the ability to remain operational during emergencies?

Level of Progress achieved: 4

Schools	Yes
Hospitals/ health facilities	Yes

Description of Progress & Achievements:

For schools there aren’t special systems to continue working in the event of disasters. Hospitals are equipped with uninterruptible power systems (note that they are under the regional competence)

To what degree do local government or other levels of government have special programs in place to regularly assess schools, hospitals and health facilities for maintenance, compliance with building codes, general safety, weather-related risks etc.?

Level of Progress achieved: 4

Schools	Yes
Hospitals/ health facilities	Yes

Description of Progress & Achievements:

Schools and hospitals are considered “sensible places” therefore all the plans related to the diverse risks have procedures dedicated to them. There are still some situations that needs further improvement

How far are regular disaster preparedness drills undertaken in schools, hospitals and health facilities?

Level of Progress achieved: 4

Schools	Yes
Hospitals/ health facilities	Yes

Description of Progress & Achievements:

The Civil Protection Plan provides constant awareness-raising activities to be carried out in all the schools; during the last year have been carried out about 50 class by the Civil Protection to schools that had applied for. Twice a year evacuation drills are made Hospitals are under regional authority.

Essential 6

Apply and enforce realistic, risk compliant building regulations and land use planning principles. Identify safe land for low-income citizens and develop upgrading of informal settlements, wherever feasible.

How well are risk-sensitive land use regulations and building codes, health and safety codes enforced across all development zones and building types?

Level of Progress achieved: 4

Description of Progress & Achievements:

Risk assessment and prevention principle are integral part of many national, regional and local rules, codes and plans on building and land uses. The Italian National law, for instance, requires for some categories of buildings a certificate of fire prevention (CPI), depending on the activity currently performed or anti seismic requirements, depending on the location area. Even if laws are good, their enforcement presents some difficulties and is somewhere lacking.

How strong are existing regulations (e.g. land use plans, building codes etc) to support disaster risk reduction in your local authority?

Level of Progress achieved: 4

Description of Progress & Achievements:

The Urban-Structure Plan (Piano di Assetto del Territorio- PAT), is the planning instrument which outlines the strategic choices concerning the structure and development of the City's land. It points out the specific vocations – geological, geo-morphological, hydro-geological, landscape, environmental, historicmonumental, and architectural – according to the targets and guidelines set out in the land planning at a higher level, as well as based on the needs of the local community. The PAT is consistent with the provincial urban plan, provides analysis on the hydraulic risk and the geological condition it also provides the minimum requirements for buildings located in vulnerable areas. The building code defines minimum quotas for the ground floors of buildings located in the Venice islands, in order to protect them from high

tides. The special commissioner, appointed following the severe floods of 2007,has issued a series of ordinances that affect the rules of planning and the evaluation of territorial development projects. The most important principle introduced is the "assessment of hydraulic invariance" required for all projects and implementation plans to be carried out; this evaluation concerns the disposal capacity of the entire area of expertise and not only to the single intervention.

Essential 7

Ensure education programmes & training on disaster risk reduction are in place in schools and communities.

How regularly does the local government conduct awareness-building or education programs on DRR and disaster preparedness for local communities?

Level of Progress achieved: 5

Programs include cultural diversity issues	Yes
Programs are sensitive to gender perspectives	No

Description of Progress & Achievements:

The Civil Protection organizes training courses for volunteers. A particular training activity is foreseen for the Civil Protection group dedicated to the cultural heritage protection. In particular this group participates to training activities regarding the restoration, conservation and safeguarding of cultural assets. A booklet on the prevention of damage to cultural heritage and a brochure on flood risk have been published. A very intense work of information and education is carried out by the GIPS group (Group of Information and Promotion of Security). GIPS is one of the volunteers group of the municipal civil protection, active in the district of Marghera. This group has been established to carry out activities of information and prevention about the risk of chemical accidents in the nearby industrial area. This group have consolidated their organization and extended the activities to all possible risk events (including an awarded project for the schools to address the hazards present in the houses). In Marghera training activities are held twice a year to test the alert sirens and “confinement plans” in schools and to repair pupils in the event of an industrial accident. Concerning the cultural diversity issues, the leaflet related to the chemical risk has been updated the last year taking into consideration characters related to the different ethnic groups living in the city. A flyer summarizing the leaflet’s information has been prepared in the following languages: Bangla, Chinese, English, French, Romanian, Russian and Arabic. However there are no programs sensitive to gender perspectives.

Reference documents:
> leaflet industrial risk (2012)

http://www.preventionweb.net/applications/hfa/lgsat//filedownloads/download/d537b88df8fe11bf4cba3d5ed1d86360

To what extent does the local government provide training in risk reduction for local officials and community leaders?

Level of Progress achieved: 3

Description of Progress & Achievements:

The Civil Protection maintains a constant formation of the volunteers also with the aim of spreading among citizens the culture of safety.

To what degree do local schools and colleges include courses, education or training in disaster risk reduction (including climate related risks) as part of the education curriculum?

Level of Progress achieved: 3

Description of Progress & Achievements:

The Civil Protection Plan provides constant awareness-raising activities to be carried out in all the schools. However, there are not specific courses included in the educational curriculum (which is set at national level). During the last year, about 50 classes have been carried out by the Civil Protection to schools that had applied for them.

How aware are citizens of evacuation plans or drills for evacuations when necessary?

Level of Progress achieved: 4

Description of Progress & Achievements:

Evacuation plans, with actual tests, are available only in schools and in main offices.

They are becoming obligatory.

Essential 8

Protect ecosystems and natural buffers to mitigate floods, storm surges and other hazards to which your city may be vulnerable. Adapt to climate change by building on good risk reduction practices.

How well integrated are local government DRR policies, strategies and implementation plans with existing environmental development and natural resource management plans?

Level of Progress achieved: 4

Description of Progress & Achievements:

The main instrument of local territorial planning is the Urban-Structure Plan (PAT - Piano di Assetto del Territorio). It collects the environmental constraints, also to maintain the security of the land, and the areas for the development of the natural resources. The development of both these environmental functions is interpreted in terms of integration of urban environmental services (parks and recreation) with a structure able to allow the development of nature (and the ability to absorb the meteorological events) and the increasing of biodiversity. The PAT includes: the wood of Mestre, the areas of environmental interest and wooded (the green belt of the mainland); SCI and SPA areas; the hydrogeological and forest restrictions; parks and nature reserves; areas (and plants) at risk of major accidents; hydraulic risk areas, hydrogeological instability and geological composition; areas of territorial conservation and upgrading; ecological networks. Despite the planning process is at a good level of definition, the realization of the works for environmental improvement, useful also for the safeguarding of the territory, show a significant slowdown due to the lack of funding.

To what degree does the local government support the restoration, protection and sustainable management of ecosystems services?

Level of Progress achieved: 5

Forests	Yes

Coastal zones	Yes
Wetlands	Yes
Water resources	Yes
River basins	Yes
Fisheries	Yes

Description of Progress & Achievements:

The municipality, even if not directly responsible for the functions listed, strongly supports the activities of the other authorities in charge. - forests The municipality started in 1999 the project to build one of the largest urban forests in Europe: the wood of Mestre. The project plans to build a natural forest of 1,200 hectares, partly carried out ??directly by public intervention, the rest to be realized by private owners made ??convenient by special incentives. The objectives of this project are numerous: clean the air and water courses that flow into the lagoon; protect the land from floods; re-naturalise and increase biodiversity; create areas for recreation and leisure; educate to an environmental culture and create a "natural living laboratory"; create a limit to the expansion of the city; recover the historical memory and strengthen the identity of the city. Currently 230 hectares have been completed. - coastal zones The Region has recently announced the intention to develop the regional Coastal Plan according to the EU Recommendation on the Integrated Coastal Zone Management in Europe (2002/413/EC). The Ministry of Infrastructure - Venice Water Authority (MAV) implemented an extensive system of measures for the protection and restoration of the environment throughout the Venice lagoon area, including also projects for the coast reinforcement of the littoral. The interventions have been carried out in agreement with regional and municipal authorities. - wetlands The Urban Regulatory Plan (PRG), developed by the Municipality, includes also the lagoon area. This Plan foresees the establishment of the Natural Park (of local interest) of the Northern Lagoon part. The Environmental Management Plan of the Northern Lagoon Park is currently being developed. The Venice Water Authority (MAV), that is responsible for the physical defense and environment restoration, entrusted CORILA to produce a new Morphological Plan of the Lagoon. The main aims of this Plan is to properly address the interventions (canals dredging, sediments supply and movement, regulations of uses) for the restoration of lagoon morphology, preserving habitat and biodiversity and considering the sustainable economic activities. - water resources The Board of Venice Lagoon Basin, chaired by the Mayor of Venice, plans and controls the integrated water system of a catchment area of 1,266 sq km extension, with a consumer basin of almost 650,000 inhabitants. The main objectives of the Board are "the efficient, effective and economical management of water resources and the environmental protection of the territory in a spirit of solidarity and social participation". - river basins The river basin of the Venice area is managed, for major

water bodies, by two river basin authorities: one of national level, the North Adriatic Basin Authority, that manages the Piave, Brenta and Bacchiglione rivers; the other of regional level, that takes care of the Sile river. The minor ground water system is managed by the Drainage Consortium Spring Waters. The City has established an office of the Public Works Department dedicated to the works against the flood risk on the mainland, that operates in coordination with the Region and the Managing Authorities of water resources. - fisheries The fisheries regulation (conservation of fisheries resources, fisheries and aquaculture management) is a competence of the Province. The municipality doesn't have specific competences in this field; however, considering the economic relevance of this sector, it is involved in projects and initiatives to promote and develop fishing activities. The management of the increasing risk associated to Climate Change within the lagoon is competence of the Venice Water Authority - MAV. Furthermore, the institution of the Northern Lagoon Park provides additional forms of protection.

Reference links:
> the wood of Mestre
http://www.enti.comune.venezia.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/58
> Restoration of the lagoon
http://salve.it/it/soluzioni/f_ambientale.htm

How much do civil society organizations and citizens participate in the restoration, protection and sustainable management of ecosystems services?

Level of Progress achieved: 3

Description of Progress & Achievements:

There are many associations of citizens working together with the local government in the concrete management and conservation of natural areas under service contracts or concessions (e.g. Wood of Mestre, coastal oasis, ex-military fortification system of the mainland). Voluntary groups also operate independently through projects and initiatives that aim at the improvement of natural resources.

How much does the private sector participate in the implementation of environmental and ecosystems management plans in your local authority?

Level of Progress achieved: 4

Description of Progress & Achievements:

The new Urban-Structure Plan (PAT) establishes that the “green belt” is implemented by private owners, taking advantage of the mechanism of building loans (grant of building volume in urban areas in exchange of the realization of naturalistic areas, where envisaged by the plan). There are two ongoing experiences particularly significant: the Venissa project in the island of Mazzorbo focused on the integration between the recovery of production and development of the Lagoon's traditional vegetable and wine and the Environment Promotion; the territorial requalification of the Certosa Island with the development of a multifunctional area (development of activities such as boating, hospitality, training, research, art, leisure activities, sports, agriculture and green spaces). The idea is to provide the right to use valuable equipment (after a public announcement) that enable businesses of excellence in exchange of the regeneration and management of areas of environmental importance. Regarding the great works of safeguarding inside the Venice lagoon the local branch of the national Ministry of Public Works (MAV) uses a consortium of private companies (Consorzio Venezia Nuova) that is in charge for developing and implementing projects. However the planning and monitoring of the general program is held by the State.

Essential 9

Install early warning systems and emergency management capacities in your city and hold regular public preparedness drills.

To what degree do local institutions have access to financial reserves to support effective disaster response and early recovery?

Level of Progress achieved: 3

Description of Progress & Achievements:

To deal with an event of emergency, is available a "reserve fund" within the municipal budget (is spent by the Municipal Board, then notified to the Council). The amount of this fund is established annually and must be comprised between 0.3 and 2% of total current expenses (in 2012 amounted to € 1,638,577 on a total of 514,078,553 €) Funds for emergency intervention and for the early recovery are allocated by the central government. Recently, for the financing of measures of this type has been introduced a legislative mechanism that increases direct taxation on fuel.

To what extent are early warning centres established, adequately staffed (or on-call personnel) and well resourced (power back ups, equipment redundancy etc) at all times?

Level of Progress achieved: 4

Description of Progress & Achievements:

The general problem regarding public funding in Italy particularly affected the local government and therefore has had consequence also on the equipment of Tidal Forecasting and Early Warning Centre (IPCSM). Despite the development programs are not fully funded, the centers ICPSM and PC keep a good supply for their operation. ICPSM, that carries out activities of forecasting and applied research, has a director, an administrative department (3 people), Service Management Operations and Maintenance (6 persons), a Research Department and Modelling (5 people). The Civil Protection office of the city of Venice, that is also responsible for coordinating interventions, is made up of: - a Municipal Office that consists of three complex units, coordinated by one manager:Civil Protection (3 persons), Industrial Risk (2 persons),

Flood Risk (6 people); - Municipal Volunteer Groups: Venezia Centro Storico, Venice Mainland, Pellestrina-San Pietro in Volta, Cultural Heritage Protection, Group for Information and Safety Promotion respect to the Industrial Risk; the total number of volunteers involved is more than 200 people. The structure is guided by a Councilor referring directly to the Mayor.

Reference links:
> Tidal Forecasting and Early Warning Centre
http://www.comune.venezia.it/flex/cm/pages/ServeBLOB.php/L/EN/IDPagina/1748?512e28c49f8e3
> Civil Protection of the City
http://www.comune.venezia.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/4941

How much do warning systems allow for adequate community participation?

Level of Progress achieved: 5

Description of Progress & Achievements:

The early warning systems operating in the town of Venice (flood risk and tides, industrial risk), capillary reach the population. This is also due to the intensive communication and preparation and to the adaptation capacity of the citizens that over time have developed a behaviors highly responsive to emergencies, both as network of volunteers and as individual citizens. It is important to note the experience of the GIPS group (Volunteers for Information and Prevention Security),one of the five volunteers' groups of the Civil Protection Service, now consisting of about 35 volunteers, all residents of Marghera (near one of the largest industrial areas in Europe), that focus its activities on prevention, information and self-protection of the citizens about the territory risks, first of all the chemical-industrial one.

Reference links:
> GIPS group
http://www.comune.venezia.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/8838

To what extent does the local government have an emergency operations centre (EOC) and/or an emergency communication system?

Level of Progress achieved: 4

Description of Progress & Achievements:

The Municipality has a Municipal Operations Center (COC) with the following nine functions that may be activated all or in part, in a flexible manner, depending on the severity of the emergency and the circumstances related to the event: planning, links with volunteer and coordination in emergency; health and veterinary assistance; weather, reporting and tide forecast; damage survey, roads, cultural heritage and essential services; mass media and telecommunications; traffic and public order; assistance to the population; volunteering; industrial risk. For each function is identified the office responsible for the activities (to be performed both in normal times, and in emergency) and one or more contact persons inside or outside the City Council, with specific tasks. The Communication Central is the fundamental element for the good functioning of the organization of first aid; it is inserted in the Civil Protection Unit that is the unit that technically manages emergencies and civil protection activities.

How regularly are training drills and rehearsal carried out with the participation of relevant government, non-governmental, local leaders and volunteers?

Level of Progress achieved: 3

Description of Progress & Achievements:

Volunteers are continuously trained and informed about risks and emergency plans. In Marghera is regulary done, twice a year, trainings to test the alert sirens and “confinement plans” in schools in order to repair pupils in the event of an industrial accident. Information and procedures against all types of risk are constantly present on the website of the Municipality(e.g. the foreseeable seasonal events). Alarm messages are highlighted through the institutional communication of the City in order to ensure the diffusion by the media.

How available are key resources for effective response, such as emergency supplies, emergency shelters, identified evacuation routes and contingency plans at all times?

Level of Progress achieved: 4

Stockpiles of relief supplies	Yes
Emergency shelters	Yes
Safe evacuation routes identified	Yes
Contingency plan or community disaster preparedness plan for all major hazards	Yes

Description of Progress & Achievements:

These information (analysis and catalogue of resources) are collected in the Municipal Emergency Plan: - Stockpiles of relief supplies The Civil protection Unit can benefit of specific agreements with big-retailers in order to take advantage of discounted price for malls' stocks of food and of relief supplies during the disasters event (Note: Due to the complication and time length of administrative procedures necessary, these agreements are non-written). - Emergency shelters Based on a division into parts of the municipal territory, a number of large public buildings have been located as facilities for emergency shelters. In case of extraordinary emergency, agreements with the hotels will be concluded. - Safe evacuation routes identified Different solutions are provided depending on the type of risk; particular solutions are identified in case of emergency for snowfalls and industrial accidents. - Contingency plan or community disaster preparedness plan for all major hazards This is the Municipal Emergency Plan.

Essential 10

After any disaster, ensure that the needs of the survivors are placed at the centre of reconstruction with support for them and their community organizations to design and help implement responses, including rebuilding homes and livelihoods.

How much access does the local government have to resources and expertise to assist victims of psycho-social (psychological, emotional) impacts of disasters?

Level of Progress achieved: 5

Description of Progress & Achievements:

When necessary the local unit uses psychological support services provided by the Civil Protection of regional level.

How well are disaster risk reduction measures integrated into post-disaster recovery and rehabilitation activities (i.e. build back better, livelihoods rehabilitation)?

Level of Progress achieved: 4

Description of Progress & Achievements:

The renewal of planning instruments and the updating of building regulations take into account the experiences of the previous disaster. Over the last few years, is consolidated the collaboration with the institutions responsible for land management sector.

To what degree does the Contingency Plan (or similar plan) include an outline strategy for post disaster recovery and reconstruction, including needs assessments and livelihoods rehabilitation?

Level of Progress achieved: 2

Description of Progress & Achievements:

At present time, the municipal Protection plan does not include such post-disaster strategy, which is partially considered in higher level documents.