



Managing Cultural Heritage at risk within the Sendai Framework for Action

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Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030

Scope and purpose

The present framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological and biological hazards and risks. It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors.

Expected outcome

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

Goal

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience

Targets

Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared to 2005-2015	Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared to 2005-2015	Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030	Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030	Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020	Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030	Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030
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Priorities for Action

There is a need for focused action within and across sectors by States at local, national, regional and global levels in the following four priority areas.

Priority 1
Understanding disaster risk

Priority 2
Strengthening disaster risk governance to manage disaster risk

Priority 3
Investing in disaster risk reduction for resilience

Priority 4
Enhancing disaster preparedness for effective response, and to «Build Back Better» in recovery, rehabilitation and reconstruction



UN World Conference on
Disaster Risk Reduction
2015 Sendai Japan

Resilient Cultural Heritage

I. Preamble

5. It is urgent and critical to anticipate, plan for and reduce disaster risk in order to more effectively protect persons, communities and countries, their livelihoods, health, **cultural heritage**, socioeconomic assets and ecosystems, and thus strengthen their resilience.



Priority 1: Understanding disaster risk

23. Policies and practices for disaster risk management should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment. Such knowledge can be leveraged for the purpose of **pre-disaster risk assessment**, for prevention and mitigation and for the development and implementation of appropriate **preparedness and effective response** to disasters

National and local levels

24. To achieve this, it is important:

- (d) To systematically evaluate, record, share and publicly account for disaster losses and understand the economic, social, health, education, environmental and **cultural heritage** impacts, as appropriate, in the context of event-specific hazard-exposure and vulnerability information;

Priority 3: Investing in disaster risk reduction for resilience

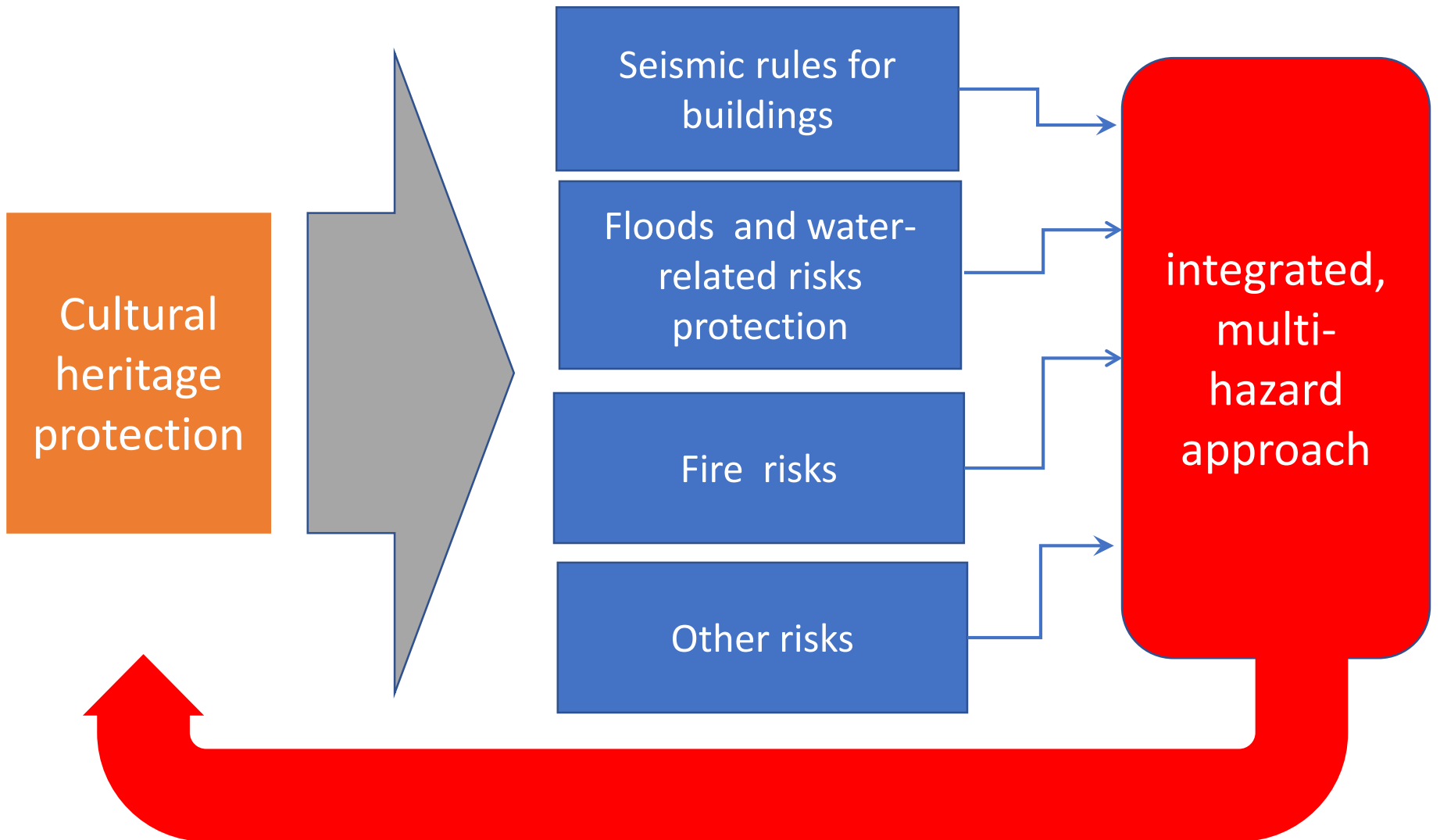
29. Public and private investment in disaster risk prevention and reduction through structural and non-structural measures are essential to enhance the economic, social, health and cultural resilience of persons, communities, countries and their assets, as well as the environment. These can be **drivers of innovation, growth and job creation**. Such measures are cost-effective and instrumental to save lives, prevent and reduce losses and ensure effective recovery and rehabilitation.

National and local levels

30. To achieve this, it is important:

(d) To protect or support the protection of **cultural and collecting institutions and other sites of historical, cultural heritage and religious interest;**

Building the Resilience of Nations and Communities to Disasters





World Heritage



Building Cities Resilience to Disasters in Europe: Protecting Cultural Heritage and adapting to Climate Change *Venice, 19-20 March 2012*



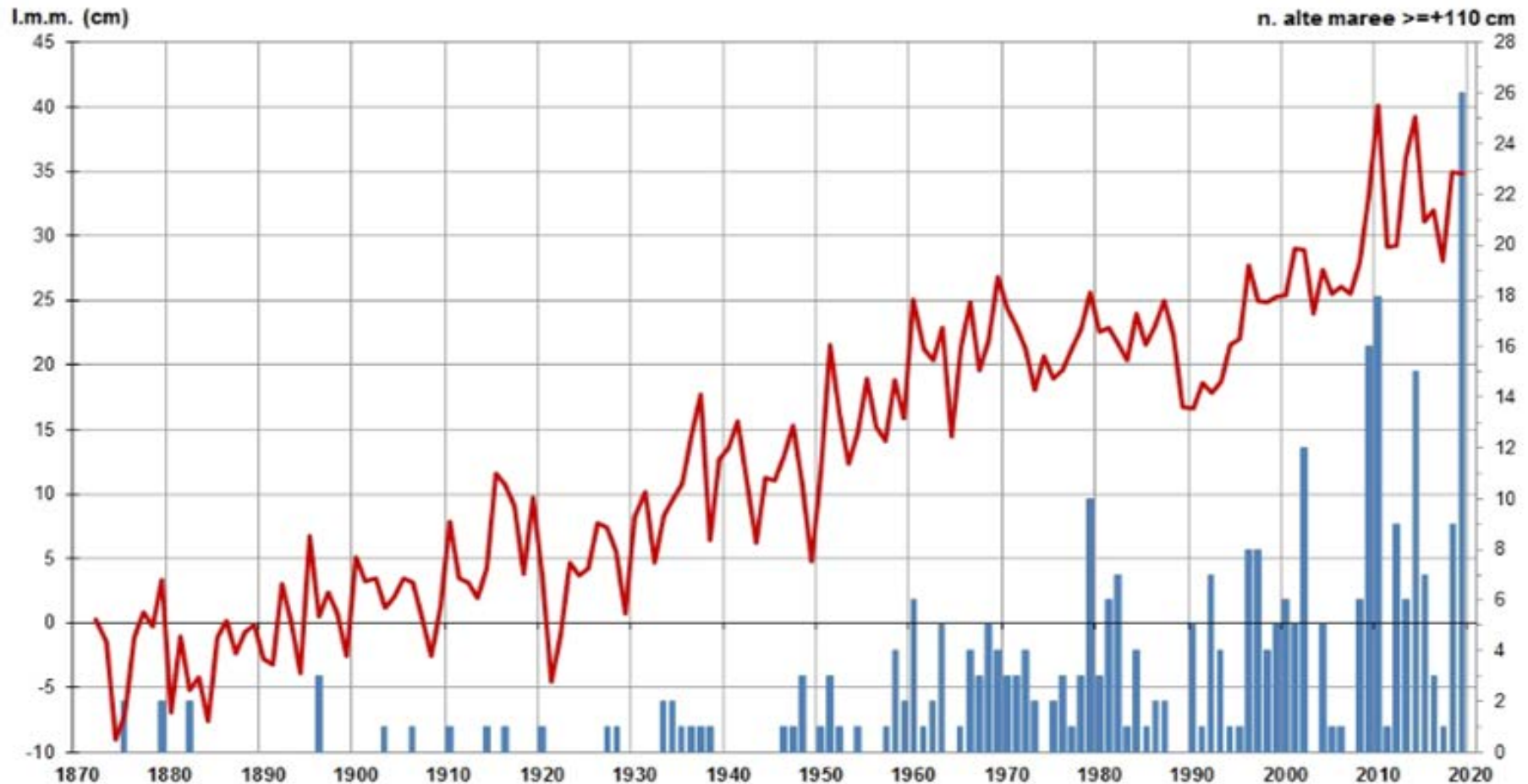
VENICE DECLARATION

- Support the integration of ***heritage concerns into national and local disaster risk reduction policies and plans*** and, at the same time, ensure that ***disaster risks are taken into consideration within management plans and systems for heritage properties*** in their territories, notably for World Heritage Cities;
- Ensure that sustainable development strategies reflect disaster risk reduction measures at the local level for urban sustainability and resilient growth;

<https://www.unisdr.org/campaign/resilientcities/assets/about/documents/Venice-Declaration-2012.pdf>



Local SLR and number of floodings per year 1870-2019



Variation of the mean of extreme tides recorded in Venice from 1872 to 2019 and high tides superior or equal to 110 cm

Changes of the mean sea level in Venice and yearly distribution of high tides ≥ 110 cm recorded in Venice from 1872 to 2019



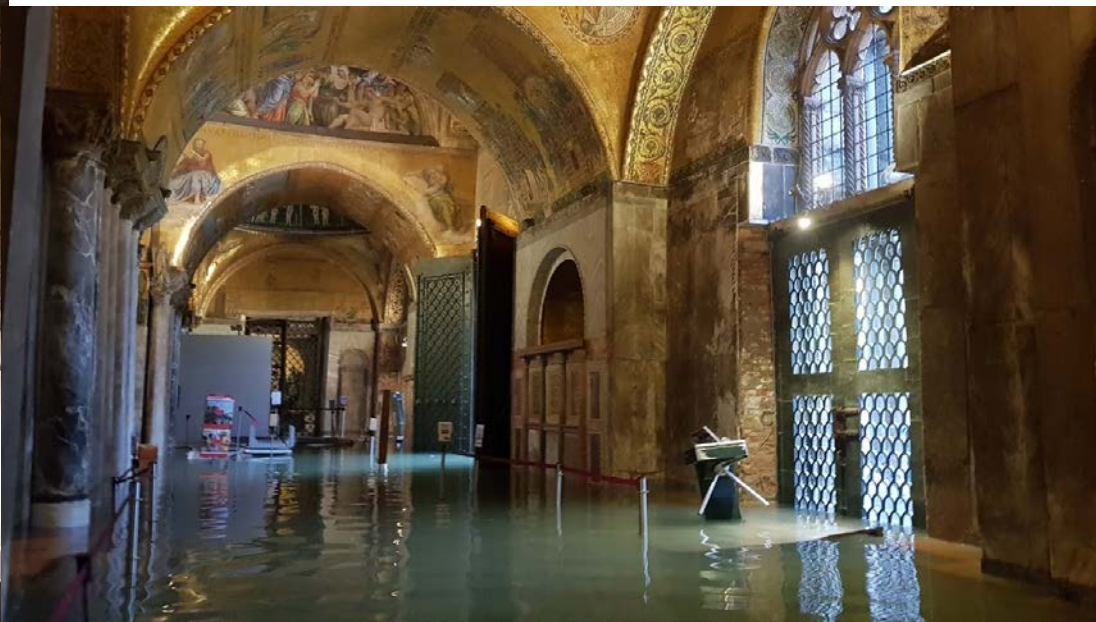
Centro Previsioni
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Segnalazioni Maree



29th october 2018

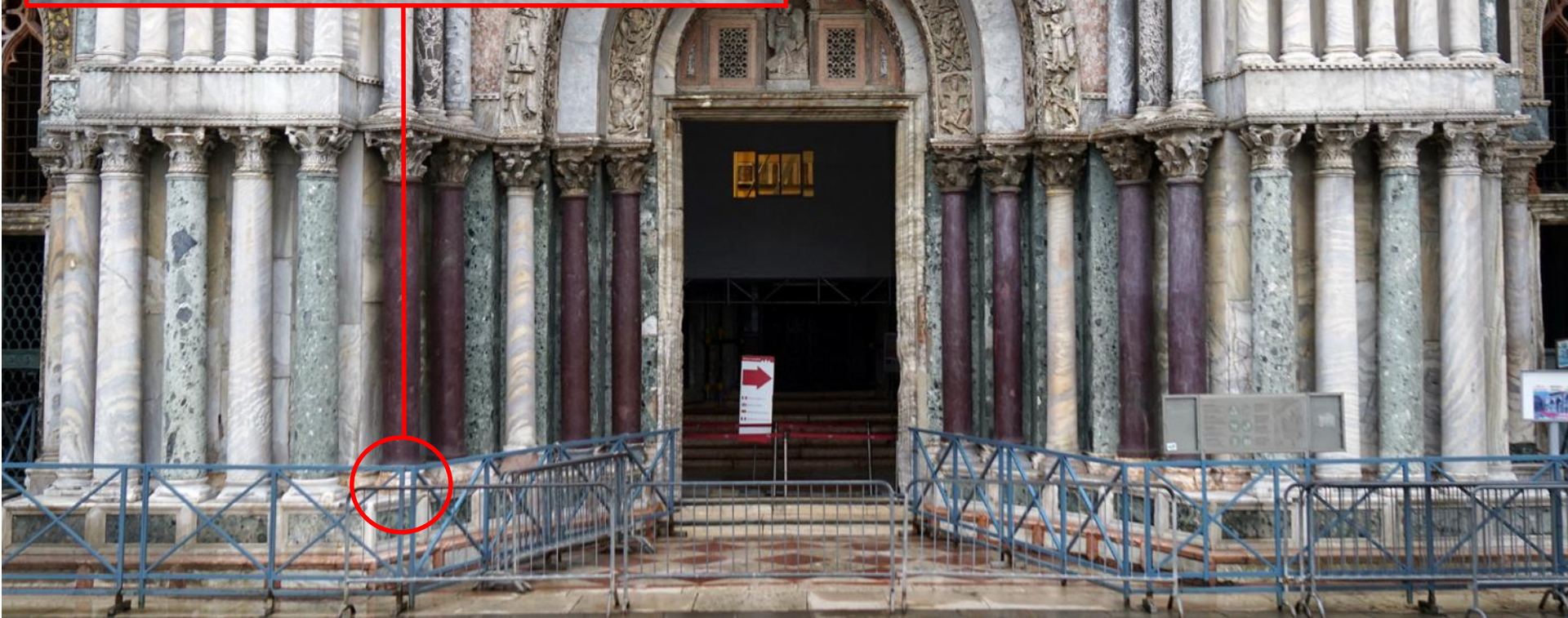


29 october 2018



12 November 2019

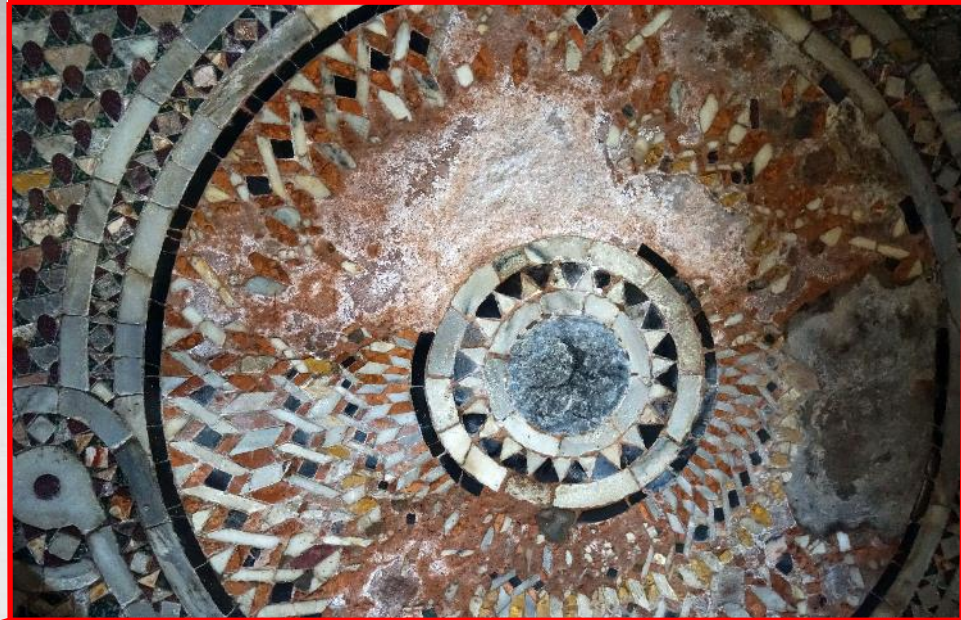
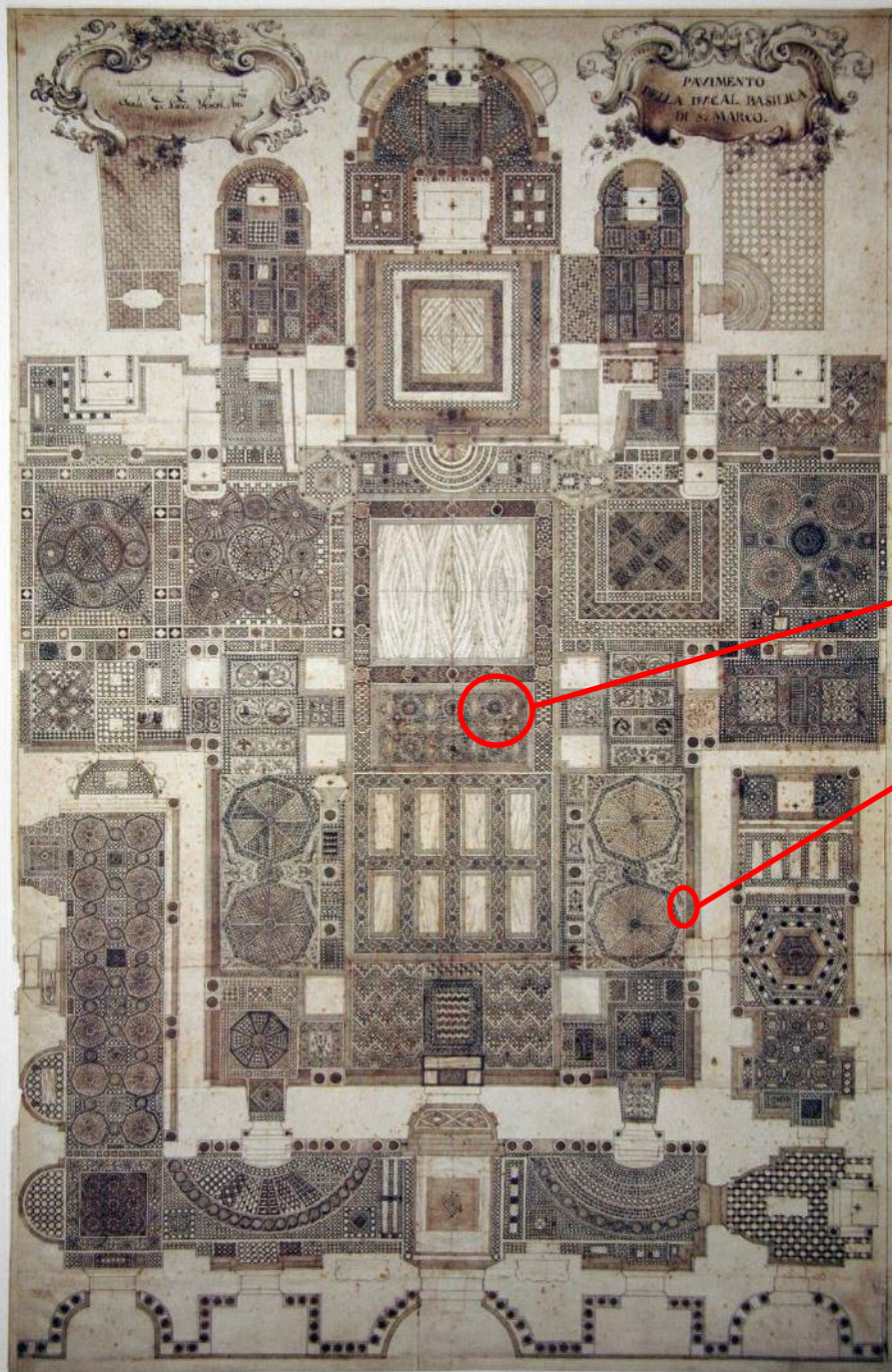






2000 sq m
of pavement
mosaics





Archangel Gabriel



This mosaic of Archangel Gabriel is located 12 m up from the pavement
The salty water rise up in the bricks by capillarity

Cultural Heritage at Risk

- St. Mark's Basilica opened in 1094, i.e. 925 yrs ago. The local mean sea level (msl) was **>1m lower than today** (!)
- The pressure by salt water in the last 100 years (+35 cm of msl), in the last 50 in particular is unprecedented. In addition, air pollution (SO_x), and more intense use.

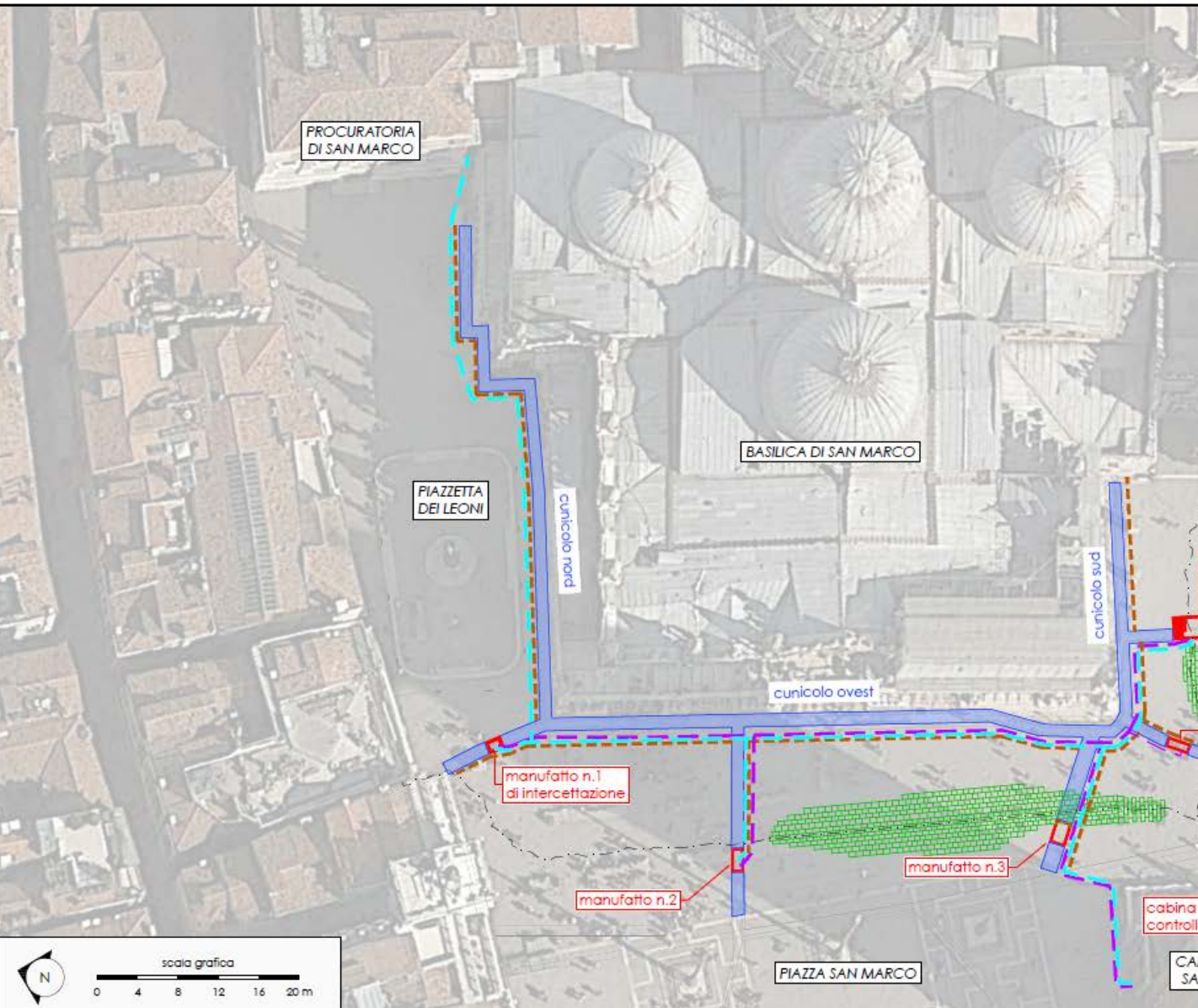
Result> **ACCELERATED AGING**



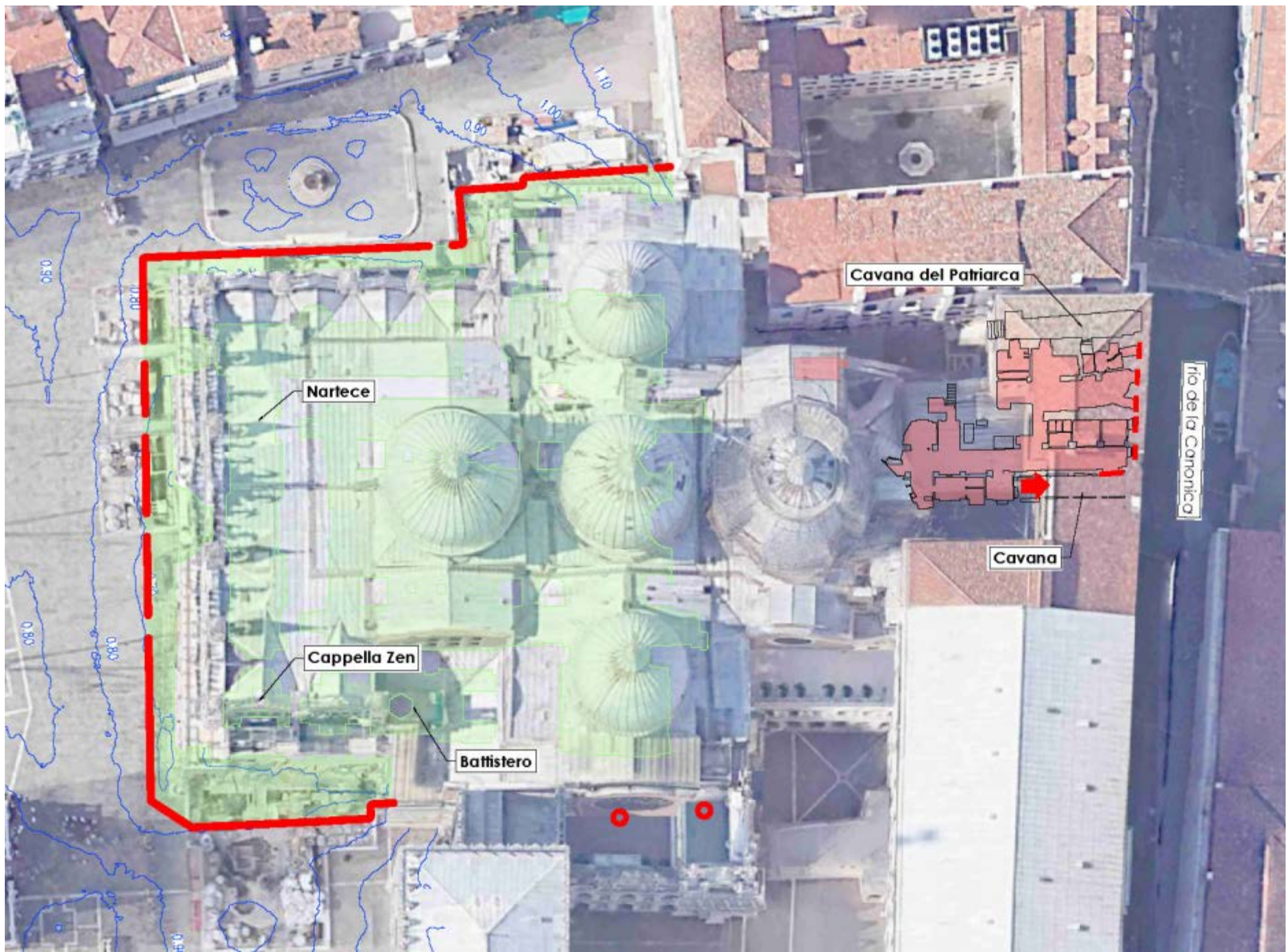
PLANIMETRIA DEGLI INTERVENTI

LEGENDA

-  manufatti di intercettazione
-  linea di alimentazione aria
-  cavidotti alimentazione elettrica/sensori
-  tubo di drenaggio Ø 150 mm
-  interventi di restauro dei cunicoli esistenti
-  recupero altimetrico della pavimentazione
-  displuvio





Nartece

Cappella Zen

Battistero

Cavana del Patriarca

Cavana

Rio de la Canonico

Citizens' participation



Since 1995 in Venice is active a group of volunteers dedicated to the protection of cultural assets in case of emergency



Training



Monitoring

Thank you for your attention

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