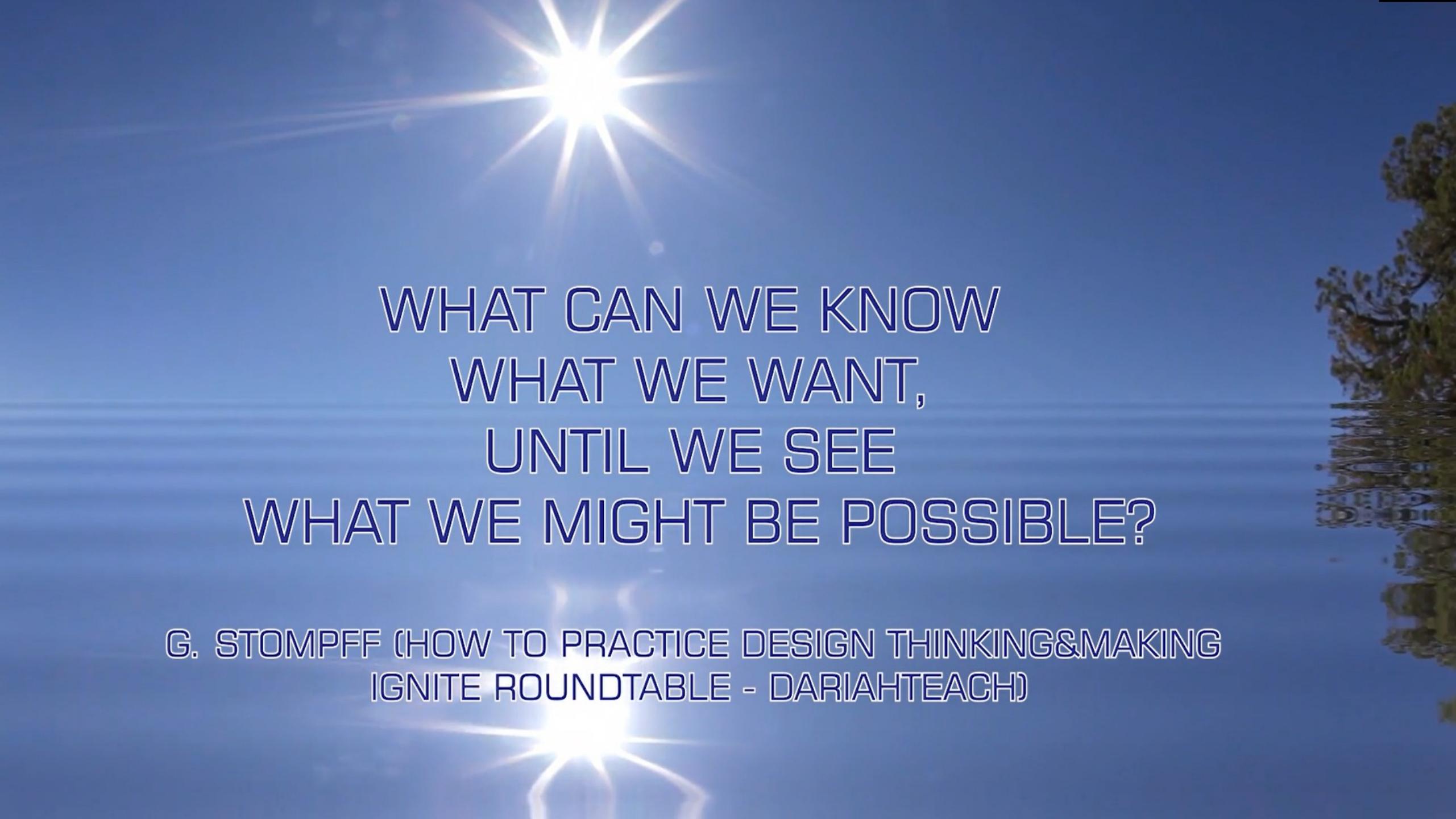




WATER MATTERS DIGITAL SOLUTIONS AND COMMUNICATIONS STRATEGIES FOR A BETTER UNDERSTANDING OF PAST EXTREME EVENTS

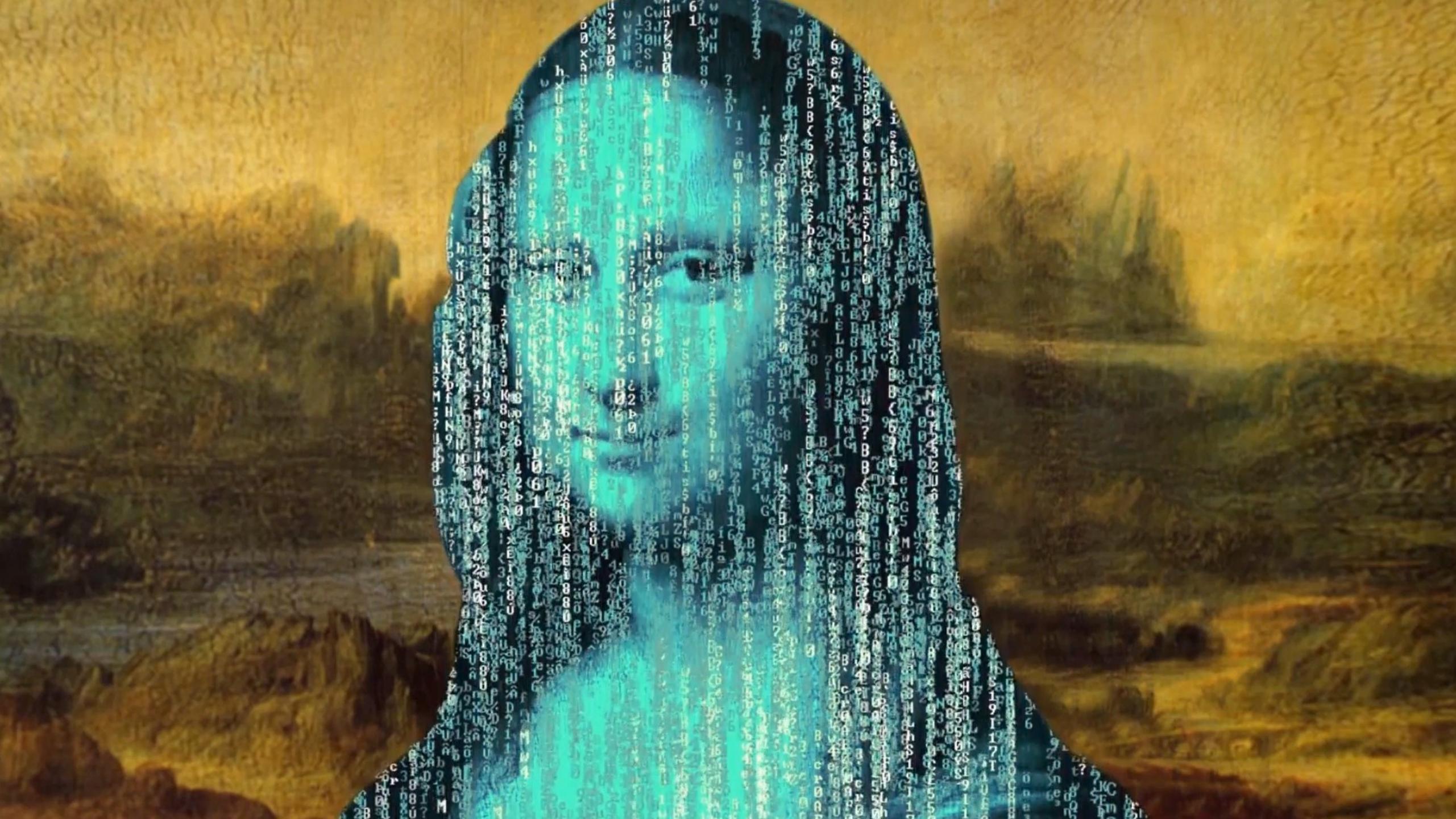
Elisa Corrò

Venice Centre for Digital and Public Humanities
Dep. of Humanities - Ca' Foscari University of Venice
googlemeet - 04/22/2020



WHAT CAN WE KNOW
WHAT WE WANT,
UNTIL WE SEE
WHAT WE MIGHT BE POSSIBLE?

G. STOMPFF (HOW TO PRACTICE DESIGN THINKING&MAKING
IGNITE ROUNDTABLE - DARIAHTEACH)



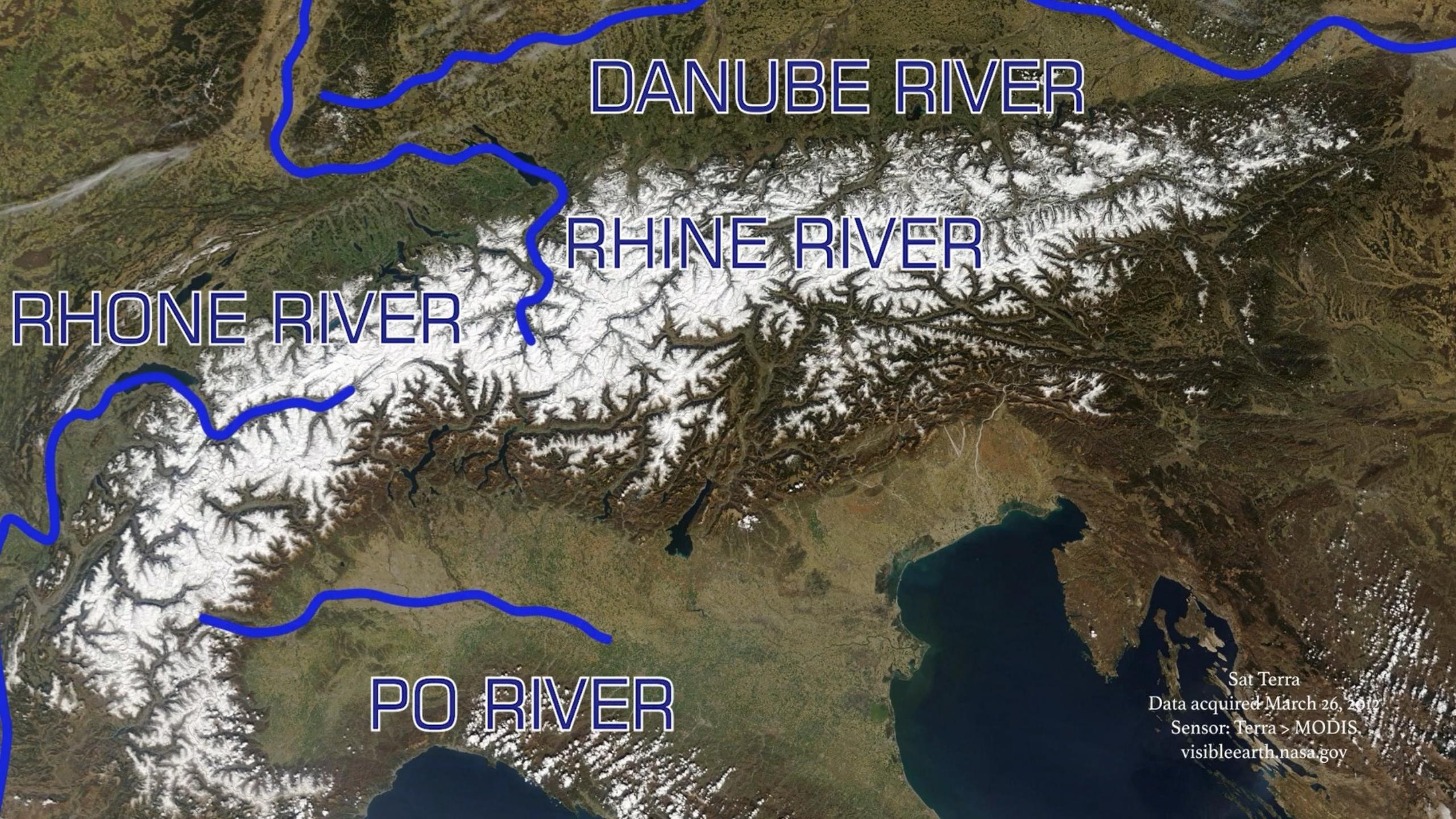
WAS THE PRACTICE TO CONTAIN
FLOWS OF WATER A GOOD IDEA?



INUNDATION

FLOOD





DANUBE RIVER

RHINE RIVER

RHONE RIVER

PO RIVER

Sat Terra
Data acquired March 26, 2012
Sensor: Terra > MODIS
visibleearth.nasa.gov



TRANSFORMATION OF THE ENTIRE ECOSYSTEM

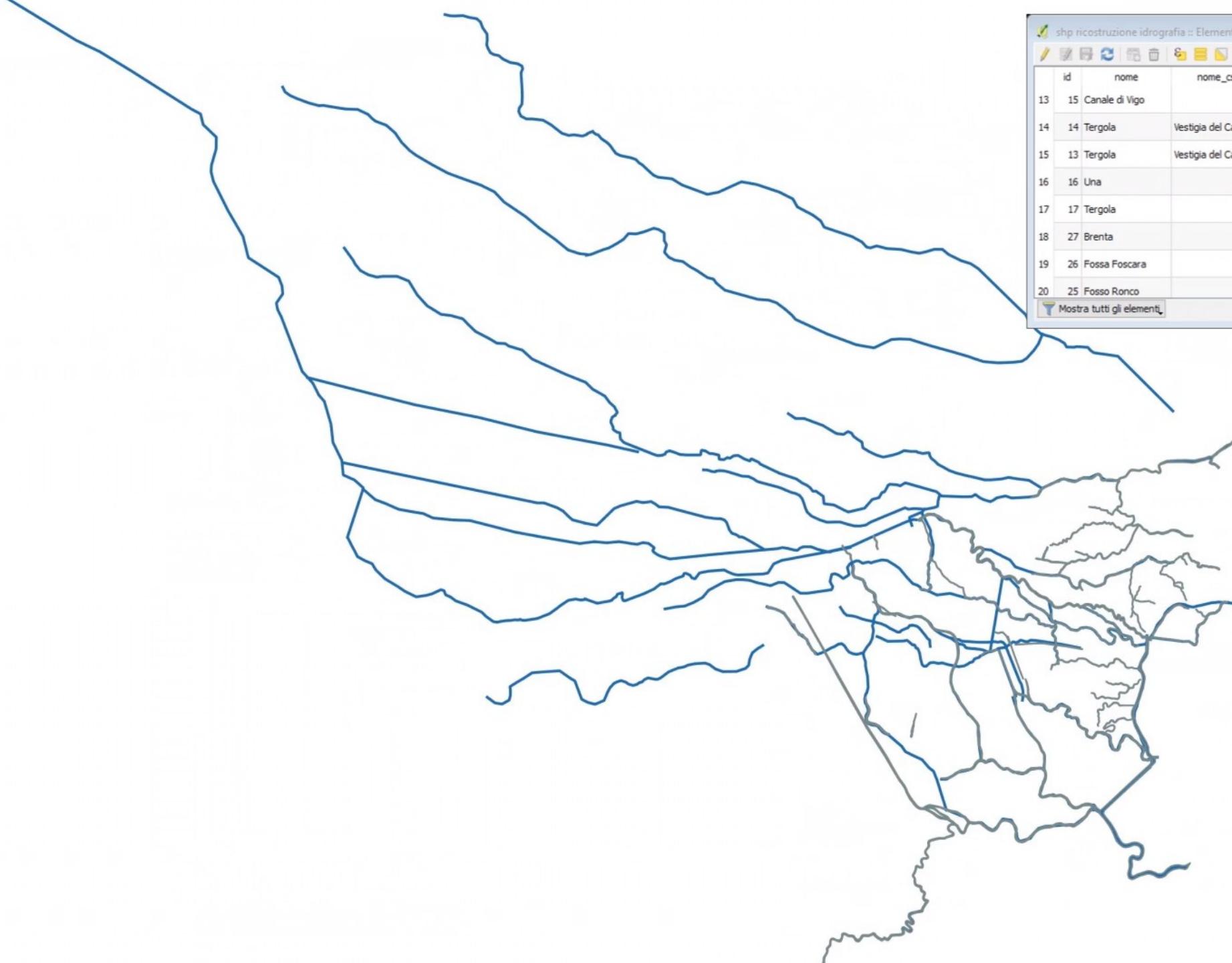


GEOLOGICAL DATA

HIST 300

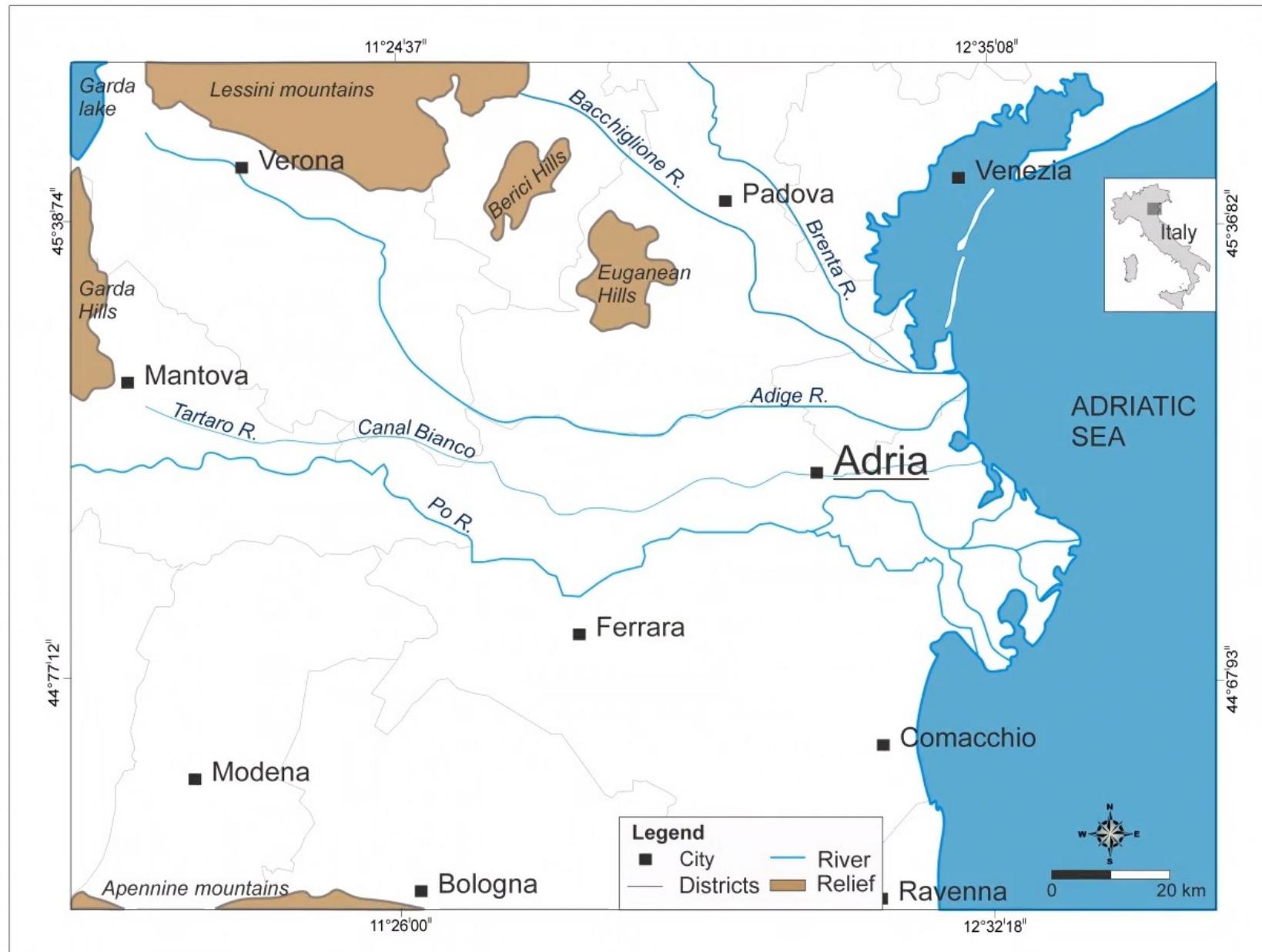
HOME

Thanks to A.A. Ruccò Project and S. Rossato



shp ricostruzione idrografia :: Elementi totali: 46, filtrati: 46, selezionati: 0								
	id	nome	nome_cs	cronologia	tipologia	fonte	note	altro_nome
13	15	Canale di Vigo		9, 10, 11, 12	canale	ASVe, SEA, Lagu...		Vissignone
14	14	Tergola	Vestigia del Canal...	9, 10, 11, 12, 13...	fiume	ASVe, SEA, Brent...		Fiume Pladano
15	13	Tergola	Vestigia del Canal...	9, 10	fiume	ASVe, SEA, Brent...		
16	16	Una		9, 10	fiume	ASVe, SEA, Brent...		
17	17	Tergola		9, 10	fiume	ASVe, SEA, Brent...	Ipotetico	
18	27	Brenta		11, 12, 13	rotta del Brenta	ArchivioIREVe, di...		Brentella
19	26	Fossa Foscara		16, 17, 18, 19, 20	canale artificiale			
20	25	Fosso Ronco		14, 15, 16	canale artificiale	ArchivioIREVe, di...		

Venice countryside
palaeohydrography
Middle Ages
(Venice River Collection Project)



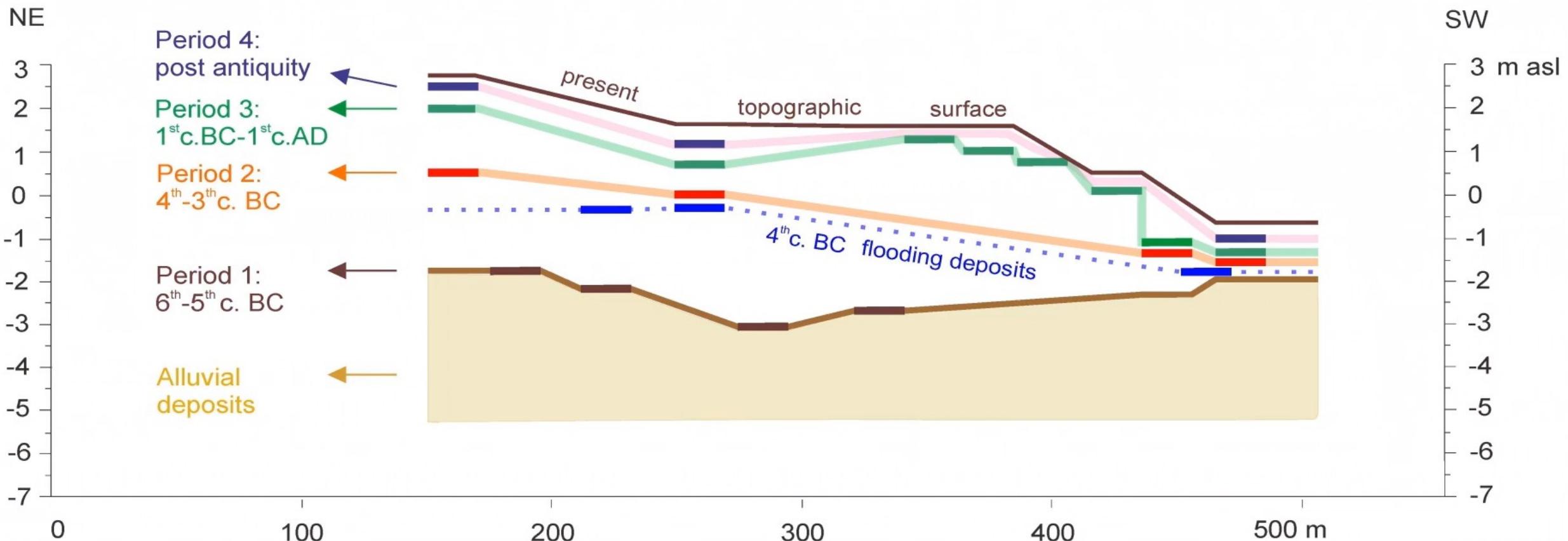


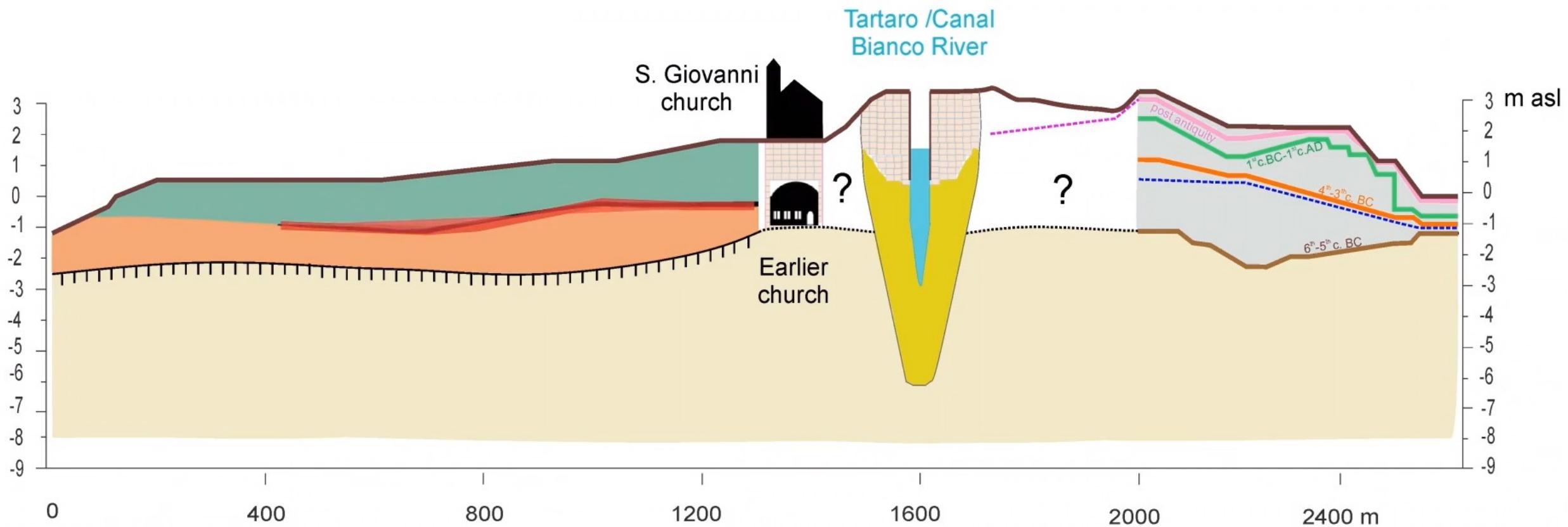


Legend

- Archaeological excavation
 - Elevation of planking level from archaeological excavation
 - Stratigraphic correlation

Stratigraphic scheme of the archaeological mound of Adria





Legend

Po alluvial sediments	Tartaro/Canal Bianco sediments	Foundation and artificial levee
Pre-10 th cent. Tartaro-Adige alluvial sediments	11 th -15 th cent. peat level	Stratigraphic correlation
Post-15 th -16 th cent. Tartaro-Adige alluvial sediments	Archaeological mound	Palaeosoil



Adria, cripta



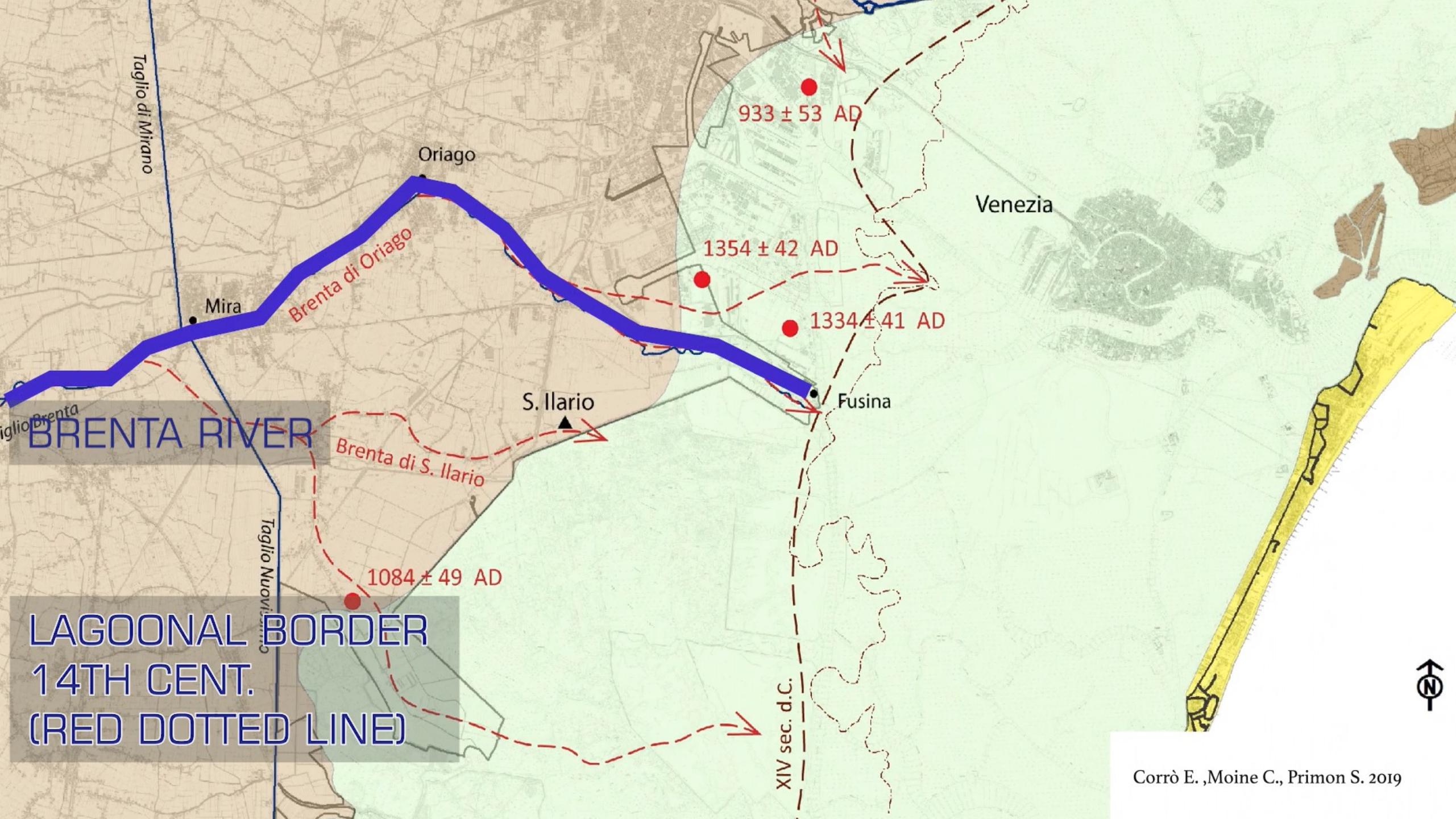
STRATEGIC POSITION

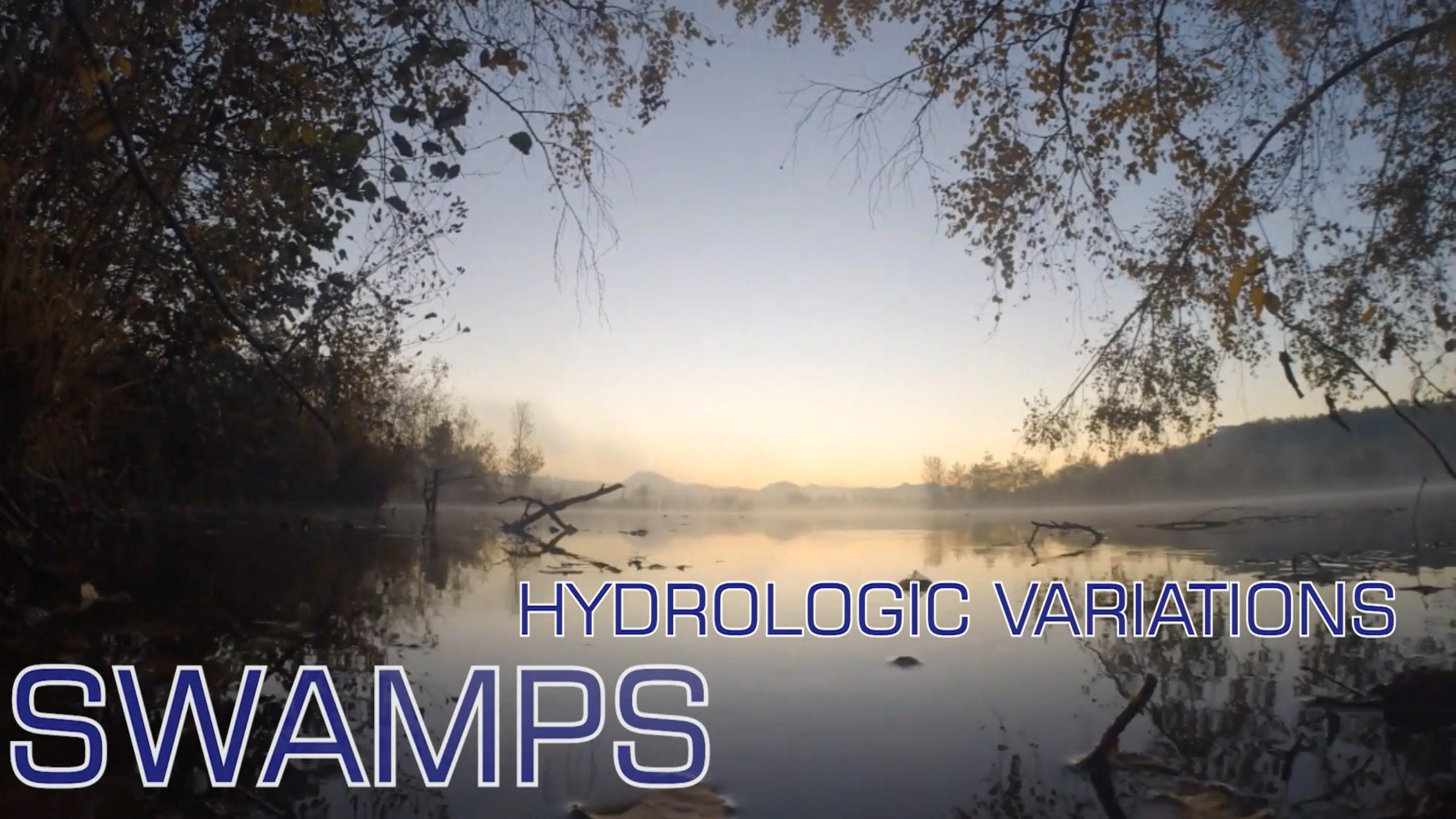
RIVER NETWORK

Sant'Ilario
chapel

Rivo Alto
(Ducal palace)

San Servolo
island



The background of the image is a photograph of a swampy area. The foreground is dominated by dark, silhouetted tree branches and leaves. In the middle ground, a body of water reflects the warm, golden light of the rising or setting sun. The sky is a soft gradient from blue to orange. Distant hills are visible through the haze.

SWAMPS

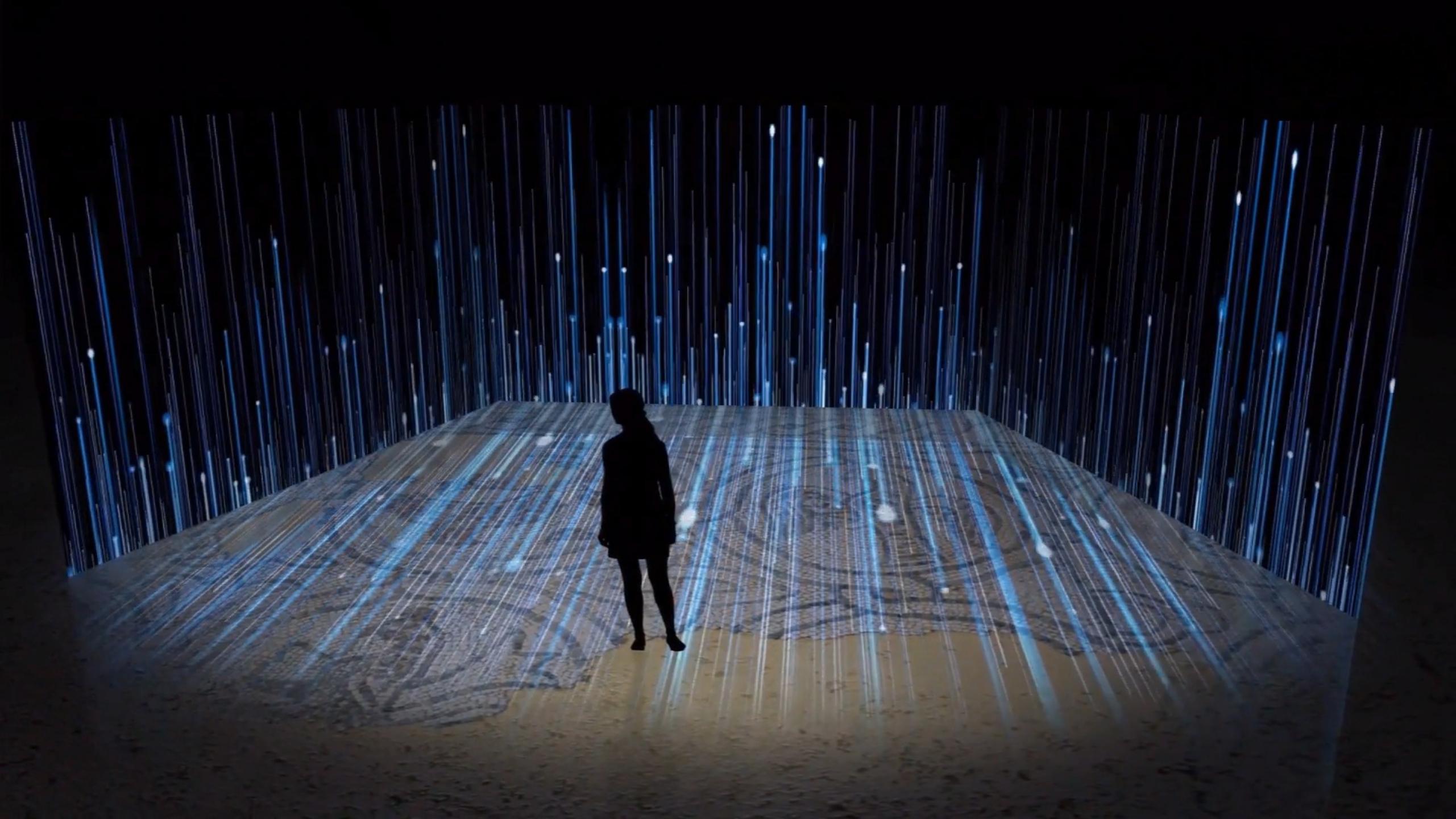
HYDROLOGIC VARIATIONS

A large, classical building with two towers and a pedimented portico, surrounded by trees under a blue sky.

**PROTECTING PERSONAL PROPERTY
MANAGE LAND**

160





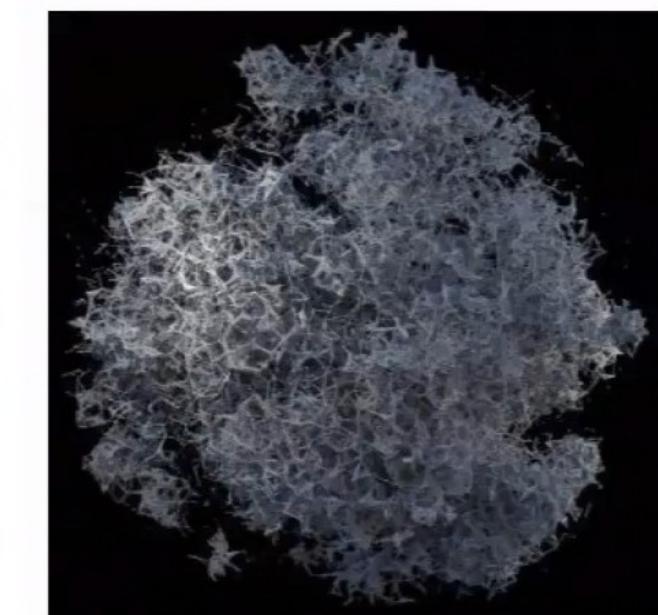
Refik Anadol - Çatalhöyük Research Project Archive

ANAMED'in "Bir Kazı Hikâyesi: Çatalhöyük" sergisi kapsamında, sanatçı Refik Anadol, Çatalhöyük'te 25 yıl boyunca yürütülen bilimsel araştırmalarda kaydedilen 250.000 buluntuya ait 2,8 milyon girdiyi yapay zekâ algoritmalarını da kullanarak hazırladığı veri heykelinde görselleştirdi.

Her birinin birbirine bağlı olduğu milyonlarca veriden oluşan arşiv, karmaşık veri setlerinin erişilebilirliğini kolaylaştırın ve yeni yorumlara imkân sağlayan dijital bir kaynak olma özelliği taşıyor. 250 bin buluntuya ait 2,8 milyon verinin bir araya geldiği arşivde, UNESCO Dünya Mirası Listesi'nde bulunan Çatalhöyük yerleşmesindeki kazılarında keşfedilen bina, birim ve ögelere ait bilgiler, buluntuların özellikleri, araştırma raporları, teknik çizimler ve fotoğraflar yer alıyor. Arçelik sponsorluğunda 24 ekranдан oluşan bu medya enstalasyonu, 21. yüzyılda bir kültürel miras alanının ve onun evrensel değerinin bilincinde, Çatalhöyük'ü veriler aracılığıyla günümüze taşıyarak 9 bin yıl önceki yaşam, araştırmacıların bulguları ve izleyici arasında bir köprü kuruyor. Anadol, verileri birbiriyle etkileşime açarak, bu bilgi birikimini arkeoloji, sanat ve teknolojinin ötesinde yeni yorumlamalara ilham olacak bir esere dönüştürüyor.

Arçelik'in teknoloji sponsorluğu ve PATTU Mimarlık'ın tasarımlıyla kurulan eser, 25 yıl boyunca yürütülen bilimsel araştırmaların kaydedilen tüm bilgileri ve milyonlarca başka girdiden oluşan Çatalhöyük arşivini görselleştiriyor. Eser, yapay zekâ algoritmaları kullanılarak hazırlanan, Türkiye'deki ilk kültürel miras çalışması olma özelliği taşıyor. Arkeolojik bağlamda bu boyuttaki bir veri kaynağı ilk defa sanatsal çerçevede değerlendiriliyor.

Eser, 14 Kasım 2017 – 18 Şubat 2018 tarihleri arasında ANAMED'in Beyoğlu'ndaki binasının girişinde görülebilir.



Refik Anadol, Çatalhöyük Araştırma Projesi



Mostrare le notifiche

Consenti

Blocca

Premi **Esc** per uscire dalla modalità a schermo intero

The
Curious
Case of

ÇATALHÖYÜK



0:08



0:03 / 2:28

Scorri per i dettagli



Translations

**“...just give us the content,
we have the technology”**

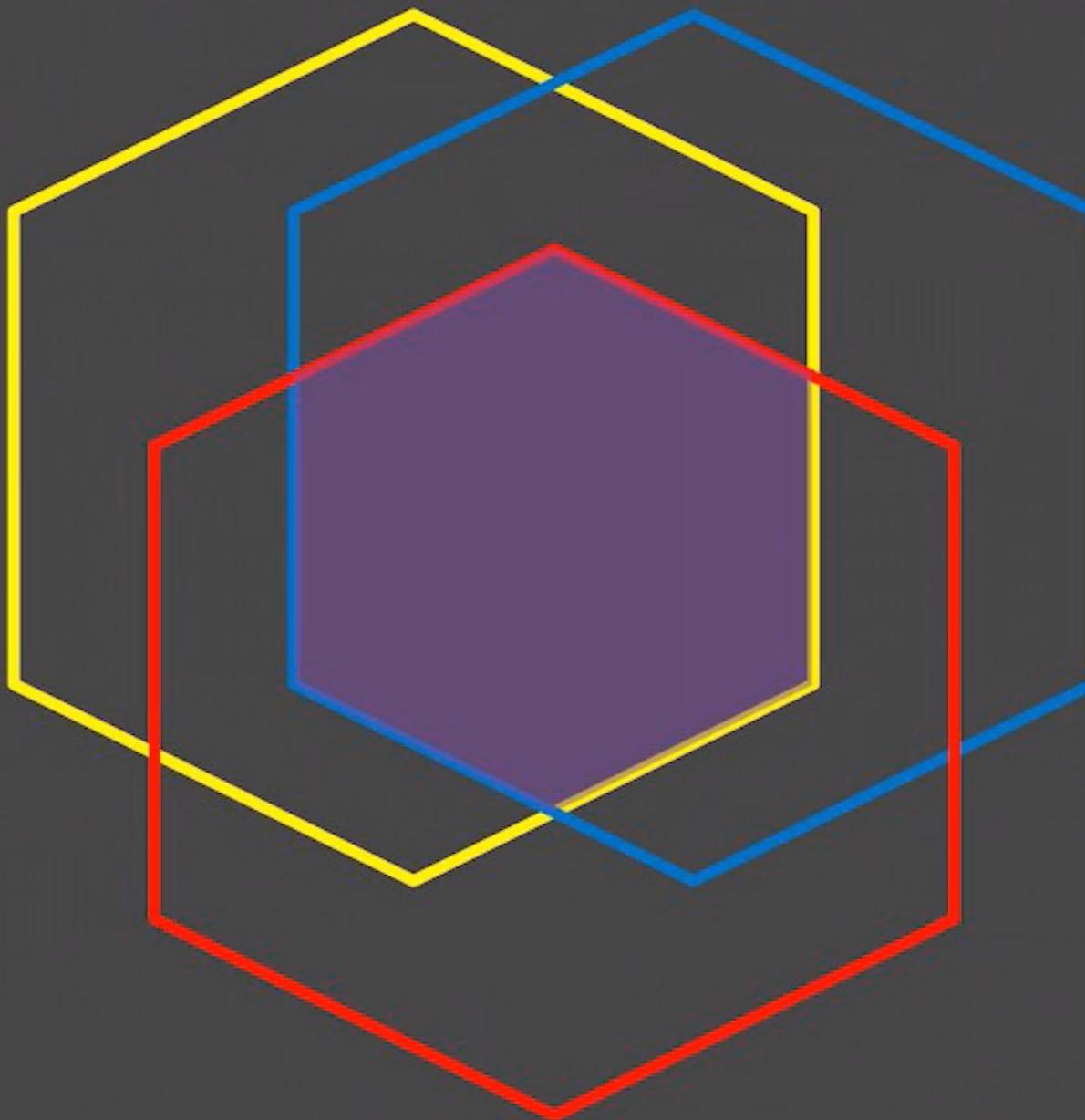


jonswords.com/blog

Immersive

Memory

Place



Osmose



Osmose (1995) is an immersive interactive virtual-reality environment installation with 3D computer graphics and interactive 3D sound, a head-mounted display and real-time motion tracking based on breathing and balance. *Osmose* is a space for exploring the perceptual interplay between self and world, i.e., a place for facilitating awareness of one's own self as consciousness embodied in enveloping space.

OSMOSE VIDEOS:

- 16-min. flythrough
- 33-min. mini-documentary
(incl. 16-min. flythrough)



BACK

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THE LAB

RESEARCH

COURSES

PEOPLE

NEWS



PULSUS

I
A Sensory Urban Instrument

The city is an electrifying fray, a maddening web of cacophony that connects every one of us to every one of others. How can we find solace in a world that doesn't stop?

PULSUS is an ambient, interactive, and experimental installation, a collaborative project between INVIVIA and the Harvard GSD Responsive Environments and Artifacts Lab. Molded and folded from concrete, PULSUS acts as an urban instrument that reflects the pulses of its surroundings wherever it is installed. Here in front of Gund Hall, the instrument collects GSD dialogues in real-time, blends them with current digital activity in Cambridge, and reinterprets the mix into an immersive and playful soundscape. The concrete blankets, as they hum to every small fluctuation in activity, encourage visitors to relax and tune in to the GSD chatter.

Come sit, press your ear against the concrete, and listen...

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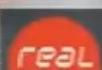
SENSORY EXPERIENCE AND THE CITY

The Mind, Sensory Experience, and the City

Genome of the Built Environment: Measuring the Unseen, Spring 2015, Harvard GSD

Teachers: Allen Sayegh, Stefano Andreani

Students: MYRNA AYOUB, TIM LOGAN, RAMZI NAJA



GENOME OF THE BUILT ENVIRONMENT | The Mind, Sensory Experience, and the City

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CHROMA



Chroma: Colors and Emotions in Cities



Genome of the Built Environment: Measuring the Unseen, Spring 2015, Harvard GSD

Teachers: Allen Sayegh, Stefano Andreani

Students: Clare Adrien, Michael Piscitello



ARCHAEOLOGISTS WORKING WITH THE PUBLIC

COMMUNITY ARCHAEOLOGY
AND HERITAGE PROJECTS
RUN BY MUSEUMS,
UNIVERSITIES OR COMMERCIAL
UNITS.

①

ARCHAEOLOGY BY THE PUBLIC

LOCAL ARCHAEOLOGICAL
SOCIETIES, METAL DETECTOR
CLUBS, AMATEUR INTEREST
GROUPS, INDEPENDENT
SCHOLARS.

②

PUBLIC SECTOR ARCHAEOLOGY

HERITAGE RESOURCE
MANAGEMENT WORK
CARRIED OUT ON BEHALF
OF NATIONAL, REGIONAL
OR LOCAL GOVERNMENT.

③

ARCHAEOLOGICAL EDUCATION

FORMAL AND INFORMAL
LEARNING ABOUT ARCHAEOLOGY
AND THE ANCIENT WORLD
IN SCHOOLS, MUSEUMS,
ONLINE, AND OUT IN
THE WORLD.

④

SOME COMMON TYPES OF **PUBLIC ARCHAEOLOGY**

BY
GABE MOSHENSKA

OPEN ARCHAEOLOGY

ARCHAEOLOGICAL WORK
THAT IS MADE PUBLICLY
ACCESSIBLE THROUGH
VIEWING PLATFORMS, WEBCAMs,
GUIDES OR INTERPRETATION
MATERIALS.

⑤

POPULAR ARCHAEOLOGY

TELEVISION SHOWS,
MUSEUM EXHIBITIONS,
BOOKS, MAGAZINES AND
WEBSITES ABOUT
ARCHAEOLOGY AND THE
ANCIENT WORLD.

⑥

ACADEMIC PUBLIC ARCHAEOLOGY

THE STUDY OF
ARCHAEOLOGY IN ITS
ECONOMIC, POLITICAL,
SOCIAL, CULTURAL, LEGAL
AND ETHICAL CONTEXTS.

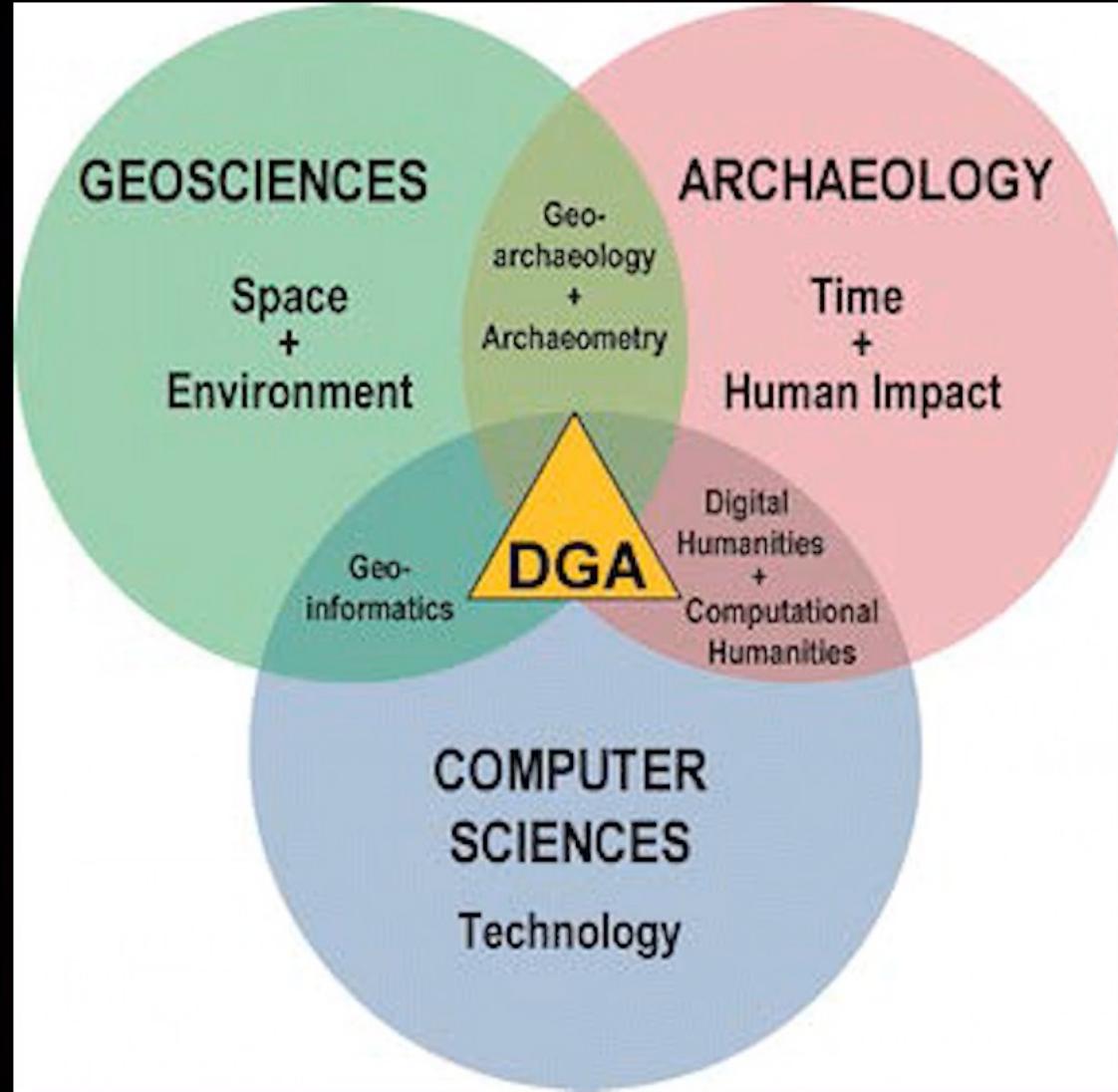
⑦

OTHER TYPES

THIS ISN'T SUPPOSED TO
BE AN EXHAUSTIVE LIST,
SO LET ME KNOW IF
I'VE MISSED ANYTHING!

g.moshenska@uci.ac.uk
@gabemoshenska

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DIGITAL CULTURAL HERITAGE PROJECTS: Research/VeDPH-unive.it/pag/39287



Ca' Foscari
University
of Venice
Department
of Humanities

[ve]dph

Venice Centre for
Digital and Public
Humanities



- Venice River Collection
- Before Marco Polo-The Origin of Venice
- Living Venice in the Past



University for KIDS 2020: un tuffo Un 'tuffo' nel paesaggio archeologico attraverso lo storytelling digitale

THANK YOU!
elisa.corro@unive.it
twitter: @E1I2A

Geoarchaeological general references:

Europe

- Arnaud**, F., Poulenard, J., Giguet-Covex, C., Wilhelm, B., Révillon, S., Jenny, J.P., Revel, M., Enters, D., Bajard, M., Fouinat, L., Doyen, E., Simonneau, A., Pignol, C., Chapron, E., Vannière, B., Sabatier, P., 2016. Erosion under climate and human pressures: An alpine lake sediment perspective. *Quaternary Science Reviews* 152: 1-18.
- Benito**, G., Macklin, M. G., Panin, A., Rossato, S., Fontana, A., Jones, A. F., Machado, M. J., Matlakhova, E., Mozzi, P., Zielhofer, C., 2015. Recurring flood distribution patterns related to short-term Holocene climatic variability, *Nature*, *Scientific Reports* 5: 16398.
- De Coninck**, A., Francus, P., 2015. The ITRAX Core Scanner: a non-destructive tool for the chemostratigraphic analysis of drill cuttings and split cores by X-ray fluorescence (XRF). [10.13140/RG.2.2.31115.39201](https://doi.org/10.13140/RG.2.2.31115.39201).
- Feyen**, L., Dankers, R., Bódis, K., Salamon, P. & Barredo, J. I., 2011. Fluvial flood-risk in Europe in present and future climates. *Climate Change* 112: 47-62.
- Hadler**, H., Vött, A., Newig, J., Emde, K., Finkler, C., Fischer, P., Willershäuser, T., 2016. Geomorphological evidence of marshland destruction in north Frisia (German North Sea coast) by the Grote Mandrenke in 1362 AD. Proceeding Ex-Aqua 2016: Palaeohydrological extreme events, Evidence and archives (Sept. 26th-1st Oct., Padua, IT).
- Jenny**, J. P., Wilhelm, B., Arnaud, F., Sabatier, P., Giguet Covex, C., Mélo, A., Fanget, B., Malet, E., Ployon, E., Perga, M. E., 2014. A 4D sedimentological approach to reconstructing the flood frequency and intensity of the Rhône River (Lake Bourget, NW European Alps), *Journal of Paleolimnology* · April 2014.
- Lowemark**, L., 2019. Practical guidelines and recent advances in the Itrax XRF core-scanning procedure. *Quaternary International* 514:16-29.
- Merz**, B., Aerts, J., Arnbjerg-Nielsen, K., Baldi, M., Becker, A., Bichet, A., Blöschl, G., Bouwer, L. M., Brauer, A., Cioffi, F., Delgado, J. M., Gocht, M., Guzzetti, F., Harrigan, S., Hirschboeck, K., Kilsby, C., Kron, W., Kwon, H. H., Lall, U., Merz, R., Nissen, K., Salvatti, P., Swierczynski, T., Ulbrich, U., Viglione, A., Ward, P. J., Weiler, M., Wilhelm, B., Nied, M., 2014. Floods and climate: emerging perspectives for flood-risk assessment and management, *Natural Hazards Earth System Science* 14: 1921–1942.
- Rossato**, S., Fontana, A., Mozzi, P., 2015. Meta-analysis of a Holocene 14C database for the detection of paleohydrological crisis in the Venetian-Friulian Plain (NE Italy). *Catena* 130: 34-45.
- Sofia**, G., Roder, G., Dalla Fontana, G., Tarolli, P., 2017. Flood dynamics in urbanised landscapes: 100 years of climate and humans' interaction. *Scientific Reports* 7, Article number: 40527.
- Toonen**, W. H. J., Foulds, S. A., Macklin, M. G., Lewin, J., 2017. Events, episodes, and phases: Signal from noise in flood-sediment archives. *The Geological Society of America*.
- Toonen**, W., Middelkoop, H., Konijnendijk, T.Y.M., Macklin, M., Cohen, K. 2016. The influence of hydroclimatic variability on flood frequency in the Lower Rhine. *Earth Surface Processes and Landforms*. 41. n/a-n/a. [10.1002/esp.3953](https://doi.org/10.1002/esp.3953).
- Toonen**, W. H. J., Winkels, T. G., Cohen, K. M, Prins, M. A., Middelkoop, H., 2015. Lower Rhine historical flood magnitudes of the last 450 years reproduced from grain-size measurement of floods deposits using End Member Modelling. *Catena* 130: 69-81.

Link:

<http://pastglobalchanges.org/about/general-overview>

Adria

- Corrò**, E., Mozzi, P., 2017. Water Matters. Geoarchaeology of the city of Adria and palaeohydrographic variations (Po Delta, Northern Italy), in Journal of Archaeological Science: Reports, 15: 482-491. <https://doi.org/10.1016/j.jasrep.2016.08.001>.
- Mozzi**, P., Piovan, S., Corrò., E., 2020. Drivers and impact of abrupt River changes in the Adige alluvial plain and northern Po Delta. Quaternary International. DOI: 10.1016/j.quaint.2018.10.024.
- Piovan**, S., Mozzi, P., Zecchin, M., 2012. The interplay between adjacent Adige and Po alluvial systems and deltas in the late Holocene (Northern Italy). Géomorphologie: relief, processus, environnement, 4: 427-440.
- Mira**
- Corrò**, E., Moine, C., Primon, S., 2019. Time travelling. Multidisciplinary solutions to reveal historical landscape and settlements (the case study of Sant'Ilario, Mira, VE), S.G. and L.O.E., (Eds.), Mediterranean Landscapes in Post Antiquity: New Frontiers and New Perspectives, Cambridge.
- Corrò**, E., Moine, C., Primon, S., 2018. Setting the Scene: The Role of Sant'Ilario Monastery in Early Medieval Venice in Light of Recent Landscape Studies, S.G. and S.G., Venice and Its Neighbours from the 8th to 11th Century, Brill, 116-141. DOI: https://doi.org/10.1163/9789004353619_008.

Digital Archaeology general reference:

- Averett**, E.W., Gordon, J., Counts, D. 2017. Mobilizing the Past for a Digital Future: The Potential of Digital Archaeology. Grant: NEH Digital Humanities Start-Up Level I, #HD-51851-14, Grantee Institution: Creighton University: <http://dx.doi.org/10.17613/M6HJ56>.
- Huggett**, J., 2017. The apparatus of digital archaeology. Internet Archaeology 44.
- Moshenska**, G., Bonacchi, C. 2015. Critical Reflections on Digital Public Archaeology, Internet Archaeology 40. <https://doi.org/10.11141/ia.40.7.1>.
- Richardson**, L., 2013. A Digital Public Archaeology? Papers from the Institute of Archaeology, 23(1): 1-12, DOI: <http://dx.doi.org/10.5334/pia.431>.
- Siart** C., Forbriger M., Bubenz O., 2018. Digital Geoarchaeology: Bridging the Gap Between Archaeology, Geosciences and Computer Sciences. S. C., F. M., B. O. (eds), Digital Geoarchaeology. Natural Science in Archaeology. Springer, Cham.

Digital general reference:

- Boisclair**, L., 2017. Variations connectives de l'installation interactive. Inter, art actuel n°125 – Connectivités 125: 20-23.
- Davis**, C., 2003. Rethinking VR: Key Concepts and Concerns. Hybrid Reality: Art, Technology and the Human Factors: 253-262.
- Malpas**, J., (ed) 2011. The Place of Landscape: Concepts, Contexts, Studies. Cambridge, MA, US: The MIT press, 19-22, 26.
- D'Eredità**, A., Falcone, A., Pate, D., Romi, P. 2016. Strategie di divulgazione dell'archeologia online: metodologie, strumenti e obiettivi. Dalla redazione del piano editoriale alla misurazione dei risultati. Archeologia e Calcolatori 27:331-356.
- Roussou**, M., Servi, K., Ripanti, F. 2017. Engaging visitors of archaeological sites through "emotive" storytelling experiences: A pilot at the Ancient Agora of Athens. Archeologia e Calcolatori 28.

Links:

<http://www.jonswords.com/blog>

<http://www.memoryscapes.wordpress/blog/>

<http://www.immersence.com/osmose/>

<https://research.gsd.harvard.edu/real/portfolio/pulsus/>

<https://research.gsd.harvard.edu/real/portfolio/chroma/>

<https://research.gsd.harvard.edu/real/portfolio/sensory-experience-and-the-city/>

<https://gasmasquerade.wordpress.com/2015/01/11/public-archaeology-some-common-types/>

www.innovatorsinculturalheritage.eu

"Virtual Reality Is the Most Powerful Medium of Our Time." Artsy. Molly Gottschalk, ed. (March 16th, 2016), illus. :

<https://www.artsy.net/article/artsy-editorial-virtual-reality-is-the-most-powerful-artistic-medium-of-our-time>

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