**Egypt Pavilion** 

18th International Architecture Exhibition La Biennale di Venezia 2023

20.05 - 26.11 2023

La Biennale di Venezia

18. Mostra Internazionale di Architettura

Partecipazioni Nazionali

# NILAB Nile as Laboratory

20.05 - 26.11 2023



# NILAB Nile as Laboratory











### NiLab. Nile as Laboratory

### Commissioners

Ministry of Culture Arab Republic of Egypt National Organization for Urban Harmony Egyptian Academy in Rome

### Curators

Ahmed Sami Abd Elrahman, Marina Tornatora, Ottavio Amaro, Moataz Samir, Ghada Farouk Hassan

### Participants

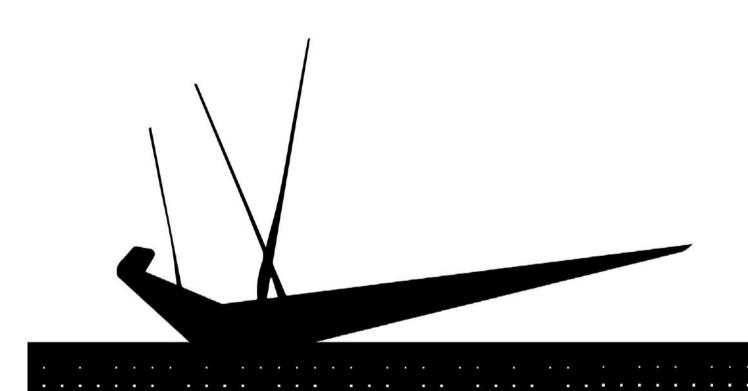
Ain-Shams University, Faculty of Engineering (Egypt) Università Mediterranea di Reggio Calabria (Italy)



@NiLab\_eg







The Ministry of Culture pays great attention to participating in important International Forums, to highlight the civilized image of Egypt, its Ancient Culture and Arts.

The Venice Biennale is one of the most important gateways overlooking the International Cultural scene, and the Architecture Biennale is a predominant opportunity to display Egyptians' creativity, ideas, new and innovative Architectural visions.

Egypt has a great influence in this International event for many years, as it is the only Arab and African country that has a pavilion in the Biennale, which indicates early awareness of the importance of participating in international events, overlooking Global occasions, and exposure to various experiences that would develop Egyptian Architectural thought.

The participation of this year revolves around the Nile, which is considered the lifeblood of Egypt, and it deserves to be dealt with in a way that works on extensive scientific research for ways to benefit from its excessive data and information. All Thanks to the National Organization for Urban Harmony for its efforts for honorable participation of the worthy position of Egypt and the ancient history of its Architecture.

And sincere wishes to the participating work team for success in presenting a meaningful and innovative visual vision.

V

Prof. Dr. Nevin Al-Kilani
Minister of Culture
Ministry of Culture Arab Republic of Egypt

Therefore, choosing the Nile as a pivotal of Egypt's official participation in the Venice Biennale of Architecture this year has a great impact in linking the lived reality with Architectural visions and ideas, which must tweet outside the traditional frameworks, and open more spacious horizons that harmonize between imagination and reality to produce Architectural creations worthy of participating in one of the most important International events in the field of Architecture is the Venice International Biennale.

What is new this year is the participation of National, Regional and International Universities with research and projects that are presented through the axes provided, which are Nature, Agriculture, Urbanization, Infrastructure, Industry and Archeology, and it is a new tributary that offers opportunities for mingling between scientific research, mental and artistic creativity.

The National Organization for Urban Harmony has taken upon itself the responsibility of taking care of this event, and creating the appropriate atmosphere for the Egyptian participants, allowing them to present the best image that reflects the interest of the Ministry of Culture in international participation in general, and in the Biennale in particular.

It is a matter of pride that the selection of the team that represents Egypt is made by a committee that includes a group of experts who are keen to choose an honorable project worthy of Egypt's status and Ancient Architectural Heritage.

Prof. Dr. Nevin Al-Kilani, Minister of Culture, also pays great attention to this event, and keens to overcome all obstacles, for Prestigious representation that reflects the interest of Egypt in International Cultural events. All Thanks to the sectors of the Ministry of Culture that contributed and supported this participation, and we look forward to the participation in this edition receiving the interest of followers from all over the world.

"Hail to thee, O Nile! Who manifests thyself over this land and comes to give life to Egypt! (...)". Just few words from the Hymn to the Nile, composed in ancient times, however full of meanings to understand the extent of the role this river has played over the centuries.

And from the past... towards the future as in a journey, we are called through our present to confront each others and respond to the urgent challenges of our times. This is the spirit of the 18th International Architecture Exhibition of la Biennale di Venezia that will represent this year, more than ever, this call. The heart of its concept is a "Laboratory of the Future" where for the first time a particular focus is on Africa and the African diaspora as colorful and rich contribute in the international debate, thanks to the unique patchworks represented by their different cultural identities.

As Director of the Egyptian Academy of Fine Arts in Rome, I feel particularly proud to represent my country in this edition of la Biennale. In the frame of this dynamic "Laboratory of the Future", the Egyptian Pavilion presents a wide project titled NiLab. A brilliant result of synergies through the well- established cooperation between the Ain-Shams University in Cairo, the Mediterranean University in Reggio Calabria in Italy and VII others International universities. Once again, a tangible example of how dialogue between cultures and the mutual knowledge are powerful tools for building new bridges and searching solutions to the problems that affect our planet and its different communities.

The Nile as laboratory, is a place of meetings to reflect, all together, on pressing issues as the role of water, "the blu gold" of the planet under the light of the global climate change, starting from the Nile.

An immersive journey through Nature and History sailing on the waters of our imagination because before creating a better world, it must be imagined. We need to be great dreamers to create the future.

I would like to express my deep gratitude to H.E. Neveen El Kilany, Minister of Culture of Egypt for the precious and ongoing support to all the cultural programs promoting an ever increasing and fruitful cooperation between Egypt and Italy

I would like as well to thank all the colleagues in Egypt and Italy who have made possible this wonderful project facing all its difficulties with professionality. I wish you an enriching trip into the Egyptian Pavilion through the Egyptian land,

"Gift of the Nile" as the Greek historian Herodotus said long time ago...

Heba Youssef Director Egyptian Academy of Fine Arts in Rome

Eng. Mohamed Abo Seada Head National Organisation for Urban Harmony

The Biennale is a memorable opportunity to showcase the artists in our country, where this year our professors and students with our Italian partners in Università Mediterranea di Reggio Calabria are honored to represent our country, but also to interact with international artists, architects and collogues around the globe.

Egypt was one of the first participants in La Biennale di Venezia for more than one hundred years ago since 1922. But this year has a special flavor as the main theme is our continent "Africa" and also the main topic is "Lab of the future" which presenting fruitful cooperation between the two universities, and we represent Egypt through Nile Lab or "NiLab".

The Nile River was and will remain a focus of participation, through scientific research and cooperation between countries, and not a source of conflict or disagreement. Its importance extends from its source passing several African countries until its estuary in the Mediterranean Sea. From the ancient Egyptian era to the present day, the Nile was and still the source and center of life, hope and work for Egypt, Africa and the people who settled on the banks of the river. It is also source of inspiration for all countries in the globe that have this wonderful environmental unique element, with all the potentials and also the challenges.

The illustrated projects are proposed by the two universities and designed by twenty-four international universities from, Czech Republic, France, Macedonia, Portugal, Spain, Sudan, Sweden, U.K., U.S.A. besides Italy, and Egypt, that were invited to participate in these projects, through the NiLab laboratory, in which they discussed different views on how possible scenarios could be implemented for the great Nile River.

Collaborating as *Mediterranea* to curate the Pavilion of Egypt at the 18th International Architecture Exhibition in Venice is a source of pride and an endorsement of the international role that our university has been able to achieve in recent years.

The meaning of calling ourselves Mediterranea lies in the desire to perceive ourselves in a supportive Mediterranean context of scientific and cultural cooperation and exchange.

For several years now, through the Double Degree Program Agreement signed with our University-Department of Architecture and Territory dArTe and Cairo's Ain-Shams University, Faculty of Engineering, we have been involved in educational, training and research exchanges with faculty and dozens of students who, in addition to representing our internationalization mission, constitute a cultural and scientific enhancement for the whole community.

The cooperation in curating the Egypt Pavilion is the result of the experiences that the design teams of the two universities have accumulated over time in the fields of architecture, city, and landscape.

A virtuous outcome of this relationship is the theme chosen for the Pavilion, which is linked to epochal issues such as climate change, the use of water resources, and sustainable development, through reflection on the Nile River, which is surely the heritage of all humanity.

In this regard, I would like to thank the Egyptian Public Institutions, the Dean of Cairo's Ain-Shams University, Faculty of Engineering, and our professors Prof. Marina Tornatora and Prof. Ottavio Amaro who, through the Landscape\_inProgress Laboratory and their collaborators, students and researchers, have dedicated commitment and professionalism in recent years to the growth of this relationship and the creation of the Pavilion.

Omar Elhusseinv Dean Faculty of Engineering, Ain-Shams University (Egypt) Giuseppe Zimbalatti Rector Mediterranea University of Reggio Calabria (Italy)

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Co	nte	ent	ts

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NiLab. Nile as Laboratory

An Open Project Lab on the Nile

**Participants** 

Nature

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Architecture + Architecture
Sheffield Hallam University, UK

Downtown — Cairo

Mediterranea University of Reggio
Calabria, Landscape\_inProgress
Laboratory, Italy + Parsons
University New York, US

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Naaada – Oena

Ain Shams University, Faculty of

Engineering, Smart and future

cities laboratory for sustainable

urban solutions (SFCL) - Egypt

Geziret El Dahab — Cairo

Dahab Island

Umeå University School of
Architecture, Sweden + German
University in Cairo Architecture
and Urban Design Program, Egypt

NA\_02
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Rebalancing Nature
Karaman Island – Sohag
La Sapienza University, Roma, Italy

NA\_02
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Politecnico University, Milano, Italy
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— Shubra Elkhema
Federico II University, Napoli, Italy
+ ENSA Paris Malaquais +
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Librahim Samy Bassant Adel Ethar

Librahim Samy Bassant Adel Ethar

Amr Zyoussef Ayman i Au. 02

Amr Zyoussef Ayman i Giuseppe Geraci Marco
Rasalt Cristian Sammarco Maria Virginia Theilig

Francesco Tosetto | NA\_03 MANCHESTER SCHOOL OF
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UNIVERSITY, UK Loris Rossi Laura Pedata José Ángel
Hidalgo Arellano Licolas Turchi | AG\_04 IUAV, VENEZIA, ITALY +
FUTURE UNIVERSITY IN KHARTOUM, SUDAN Mauro
Sandro Grispan Gabriele Catanzano Mattia Cocozza Robert
Vicentini | AG\_05 AIN SHAMS UNIVERSITY FACULTY OF
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DEPARTMENT, EGYPT Mohamed Heweidy \_Mohamed El-Fayoumi
Tuga Galal \_Omar El Henedy \_Malak Hazem
\_Mennatallah Saleh \_Mohamed Selim \_Rana
Shams \_Yara Soliman | AG\_06 UNIVERSITÀ DI
CAWERINO + UNIVERSITÀ DI UDINE, ITALY
Luigi Coccia \_Claudia Pirina \_Sara Cipolletti
\_Giovanni Comi \_Pietro Ferrara \_Alessia Guaiani
\_Simone Porfiri Ettore Vadini | UR, 07 AIN SHAMS
UNIVERSITY, FACULTY OF ENGINEERING, SMART
AND FUTURE CITIES LABORATORY FOR
SUSTAINABLE URBAN SOLUTIONS (\$FCL) - EGYPT
\_Samma lelkhateeb \_Donia el Boghdady \_Nadine
Khalil Nadine Mohamed \_Donia Mostafa | UR, 08
POLITECNICO, MILANO, ITALY + CZECH
REUNICAL UNIVERSITY PRAGUE \_CZECH
REUNICAL UNIVERSITÀ MEDITERRANEA REGGIO CALABRIA
LHussain \_Ummi Fathima \_Xie Wanyi | UR\_09
UNIVERSITÀ MEDITERRANEA REGGIO CALABRIA
LHBORATORIO LANDSCAPE\_INPROGRESS NA\_01 UMEÅ UNIVERSITY SCHOOL OF ARCHITECTURE, SWEDEN + GERMAN UNIVERSITY IN CAIRO ARCHITECTURE AND URBAN DESIGN PROGRAM, EGYPT \_Cornelia Redeker \_Hassan Hussein Abu Henedy Henedy

ITALY + PARSONS UNIVERSITY NEW YORK, US

Ottavio Amaro \_Marina Tornatora \_Mostaz Samir
\_Cristian = Penna \_Erre Frankin Roneo \_Marina
Lorenza Crupi \_Matero Milaro \_Arwa Elrab Abbas Malak
Layda \_ Layda

# NiLab Nile as Laboratory

Ahmed Sami Abd Elrahman, Marina Tornatora, Ottavio Amaro, Moataz Samir, Ghada Farouk Hassan

NiLab is a Laboratory for the knowledge and development of ideas and projects along the Nile River, an emblematic opportunity to reflect on the theme of water in the broader context of climate change.

Never as in Egypt, the presence of a waterway has been identified with the history of civilization in its cultural, scientific, and humanistic aspects. Its extraordinary geographical dimension traces natural and man-made landscapes and feeds cities, productive systems, reserves, and agricultural landscapes.

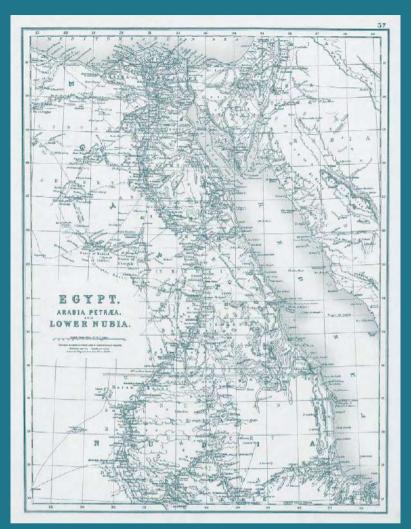
Any alteration of the Nile River can cause a destruction of the millennial balance between living species and the historical and natural landscape, especially in an age where major territorial and productive transformations risk disturbing the established natural balance, causing entropy and decay.

The themes, corresponding to six landscape sections - Nature, Agro, Urbe, Infrastructure, Industry, Archaeology – were developed within eighteen areas of design intervention, identified for a common international comparison between Egypt and the planet.

Together with the Faculty of Engineering of the Ain-Shams University in Cairo (Egypt) and the dArTe Department of the Mediterranea University of Reggio Calabria (Italy), who have been collaborating for years in research and teaching activities, 24 international universities have been invited to build NiLab. In this laboratory, students, teachers, and researchers discuss possible future scenarios along the river.

The aim is to produce a reflection on design strategies as a contribution to major urban and landscape emergencies, fulfilling the needs of the broader contemporary context, where projects are required to provide new reflections on architectural tools and languages.

Mountains & Entry, Rivers, Colton, G.W; 1856 The Colton firm published this map in their world atlas from 1856 to 1880 and perhaps later. © David Rumsey Map Collection. Cartography Associates | www.davidrumsey.com



Egypt, Arabia Petraea and Lower Nubia. Nile Valley. BARTHOLOMEW 1898 old map

"Nature has never been concerned with creating beauty. We are the ones who feel psychologically touched by what we think is beautiful. We feel the creative force behind the form, and this affects us both emotionally and physiologically. The ancient Egyptians did not strive to make their temples beautiful as an end in itself. Their level of understanding of the whole universe, higher than ours, and their attempt to make the temple a small mirror of it made this happen automatically"

Hassan Fathy 1

# An Open Project Lab on the Nile

Marina Tornatora, Ottavio Amaro

Located in the Mediterranean area, which is continuously facing increasingly epochal ecologicalenvironmental crises, Egypt, with its Nile region, has once again become emblematic of the possible consequences of the ongoing phenomena of drought, sea rise, energy crisis, and the potential weakening of its settlement and territorial system.

Bearing the burden of 11 African countries with ever-increasing populations, including Egypt, with more than 80 million people exploiting 98% of their water needs from their river, the Nile represents both a resource 25 and a problem.

Egypt has continuously performed territorial actions to prioritize economic and productive interventions involving the delta since the post Second World War period, with a keen eye on globalization processes, often far from the sustainable use of local resources. This risks impoverishing entire geographic areas with significant imbalances between city and countryside, widespread settlement systems in agricultural villages, and further marginalization by extending suburbs in urban areas.

In light of such planetary changes, NiLab. Nile as Laboratory invited eighteen research groups, drawn from twenty-four Egyptian, European, and non-European universities, to reflect on design and architectural strategies along the Nile River. This context is a unitary and paradigmatic geographic sphere with a strong identity in the history of civilization, concerning cultural, scientific, and humanistic aspects, despite the current territorial imbalances.

NiLab. Nile as Laboratory intends to prioritize the academic sphere in the belief that the projects constitute the necessary field of research, a moment of knowledge, and the meeting point between theory and practice. The central theme is water, in its human and design-related significances and concerning how it interacts in historical and contemporary landscape contexts. The river is proposed as a body in the natural and urban landscape with a changing form, where design can configure contemporary spatiality with different relationships between the built, natural and man-made elements. The relationship between soil and water, between constructions and water, becomes the binder of places' interpretation through design experimentation as a product of knowledge.

Three sites are proposed for each of the six themes - Nature, Agro, Urbe, Infrastructure, Industry,

NiLab Nile as Laboratory An Open Project Lab on the Nile

Fathy H., Cosa è una città (What is a City), in "Casabella" n. 653, 1998 pag. 56

Archaeology – making up a possible synchronous synthesis of current scenarios along the Nile.

Concerning Nature, despite the major changes that have modified and often compromised the identity of the river's flora and fauna, there are still important nature reserves, nurturing that mythological and religious imagery at the root of ancient Egyptian civilizations, identified with the presence of certain animal species. Today more than ever, this heritage of biodiversity and naturalistic identities must be protected on a scientific, environmental, and landscape level, considering climate change and drought phenomena.

Agro is the theme identifying the area's character along the river, organically linked to the spatial-temporal transitions of nature, obscured by a system of infrastructures (dams, morphological changes, etc.) that have transformed some identity features. The agricultural activity is nonetheless primary for subsistence and the production of the majority of Egypt's alimentation and creates challenges regarding production, landscape and innovation related to new environmental challenges and the sustainable use of the water resource.

Urbe, the territorial imbalance implemented primarily in the postwar period, through the depopulation of the countryside and the creation of large urban concentrations towards the Nile Delta, has led to the construction of endless hybrid city suburbs in a condition of non-city and decay. The combination with the trend that had already begun with the importation of European urban models in the late 19th century and continued in contemporary times with building and architectural globalization leads to urban degradation and eradication. Moreover, uncontrolled expansion into the countryside and desert, abandonment of historical centers, and polluting transportation threaten to destroy the identity of an Islamic city with public space, collective places, buildings, and technological systems in close relationship with the place and its environmental specificity alongside its distinctive elements.

Concerning Infrastructure, although the Nile still holds its historical role as a line of transportation and exchange between the entire settlement system developing along its course, the relationship between land and water needs to be reconsidered. Port systems, crossings, as well as embankments, and fishing-related activities, can allow the original recovery of the meaning of living along the river, together with the landscape balance, which is too often compromised by polluting and invasive interventions.

*Industry* has grown in the logic of globalization, often at odds with territorial and landscape sustainability.

It is now experiencing a condition of reconversion on both the technological and environmental levels. The proposed theme addresses the need to redesign old, polluting, and invasive industrial areas to privilege, both in terms of research and production, the innovative systems of green industry linked to local resources, and advanced technological development in harmony with urban and natural settlement systems.

Archaeology along the Nile, both on a monumental and general level, narrates a cultural heritage of humanity strongly linked to the place in its essence of water, soil, and desert. Therefore, actions on this design theme 27 can re-establish meaningful relationships with the settlement systems, which have developed in a spreading and often indifferent manner over time. This is coupled with the cultural need for tourism enhancement concerning services, accessibility, and an overall more innovative supply.

In this context, the eighteen sites identified along the river's course, from the Aswan Dam to the Delta, represent a paradigmatic system of territorial and landscape conditions to perform design reflection on the variables contemporaneity poses. This journey is taken by adopting inverse perspectives, from the river and the land, in search of relationships and interactions between memory and innovation.

In addition to representing a critical analysis system for the transformations of the last decades in extraordinary sites, the projects address future scenarios to re-establish balances between nature and the environment, along with visions that, without sacrificing the aesthetic and expressive language of places and architecture, represent new living conditions.

Water, energy, biodiversity, pollution, reconversion processes, and soil enhancement are all variables of infrastructural and architectural scenarios to look at innovative and scientific processes without losing sight of the intertwining of memory and the project's ability to engage with existing resources to design the new forms of landscape and territory.

In other words, a new awareness emerges, concerning the relationship with nature, history, and the environment, within the complexity of the post-industrial reality and a society increasingly oriented toward communication and immateriality scenarios.

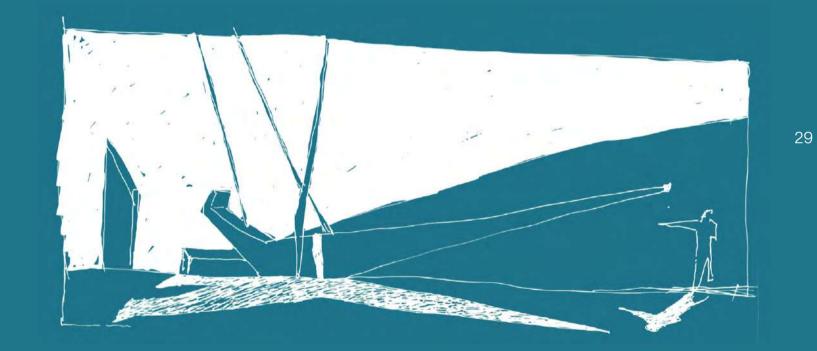
Within this context, the projects appear as possible narratives of stages of a new contemporary *Grand Tour*: agricultural scenarios that recognize the iconographic power of the geometrizations of rural plots, relating to Marot S., The Return of the Landscape, in Desvigne & Dalnoky, Motta Architettura Milano, 1996, p. 7

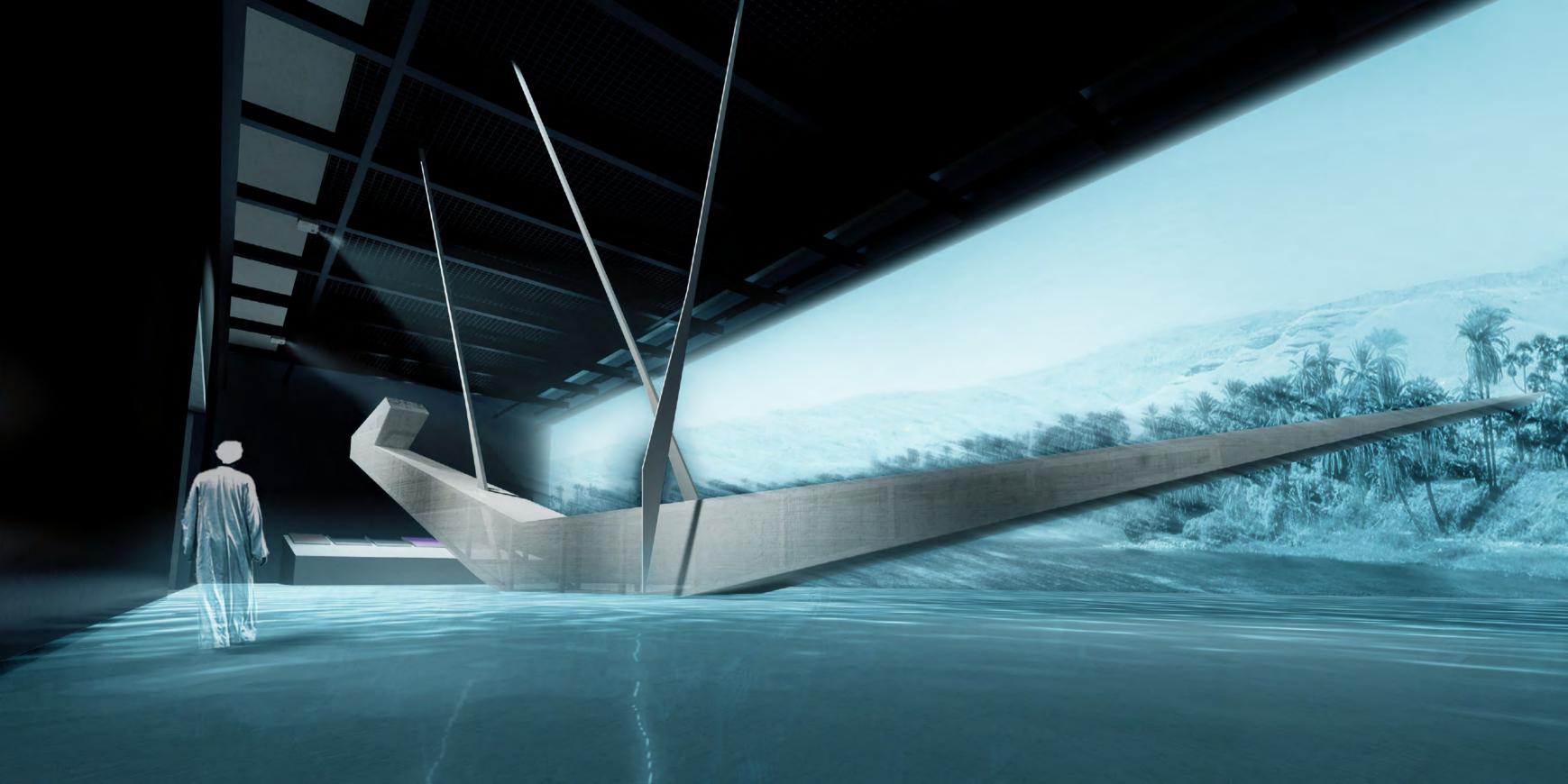
the urban ones within a design idea that seeks reciprocal boundaries. This is compounded by innovation 'sanctuaries', such as research centers and ecological infrastructures at the service of nature. The impressive Nile's 144-island archipelago emerges as a habitat for biodiversity and a new green map of the river's course, complementing archaeological landscapes' powerful and evocative character. They make up a true 'second nature' whose history must be enhanced beyond its monumental aspects. Moreover, the large residual voids from industrial reconversion processes are turned into opportunities to rediscover environmental balances and new proportions within the city, evoking resilience that re-proposes new interactive edges with the river and new forms of infrastructure. Finally, the urban system pursues a symbiosis with nature on the topic of sustainability, regenerating large building densities through the injection of green areas, the creation of voids and public spaces together with typical settlement systems of the Islamic city, often succumbing to globalization-driven models.

The elaboration of projects is a necessary step of the research work, as a synthesis of knowledge, investigations, and experiences through drawing, leading to project ideation. The attempt is to operate the anamnesis mentioned by Sébastien Marot, "... looking at the territory and public space as a land of ancient culture or a palimpsest bearing the more or less evident sign of all the gestures that, in memory, have contributed to shaping that specific landscape, and nothing else. In these contrasting or universal traces layered over time, anamnesis deciphers intentions and potentials to be safeguarded and transmitted." – <sup>2</sup>

Punctual responses, along with the *utopia of reality* (E.N. Rogers), are the outcomes of workshop and design experiments distributed differing by schools and research areas, re-weaving plots and threads with the history of places in the awareness of current global and local radical transformations.

In this sense, the Nile tends to a new unitary dimension, with the sites of the Laboratory as the starting points to take concrete action for the regeneration and re-signification of its presence in a possible future.





Nature

NA 01 Daĥab Island

NA 02

Karaman Island – Sohag

NA 03

Philae Island – Aswan

Agro

AG 04 Edfu – Aswan

AG 05 El Fawal Island – Behira

AG 06

Sa El Hajar – Gharbia

Urbe

UR 07

Naqada – Qena

UR 08

Tell El Amarna – Menia

UR 09

Downtown – Cairo

Infrastructure

IS 10

Naqada – Qena

IS 11

Magra El Oyoun – Cairo

IS\_12 El Qanater El Khayreya

Industry

IN 13

Ezbet El Borg – Damietta

IN\_14

Naga Hamady – Qena

IN\_15

Helwan – Cairo

Archaeology

AR 16

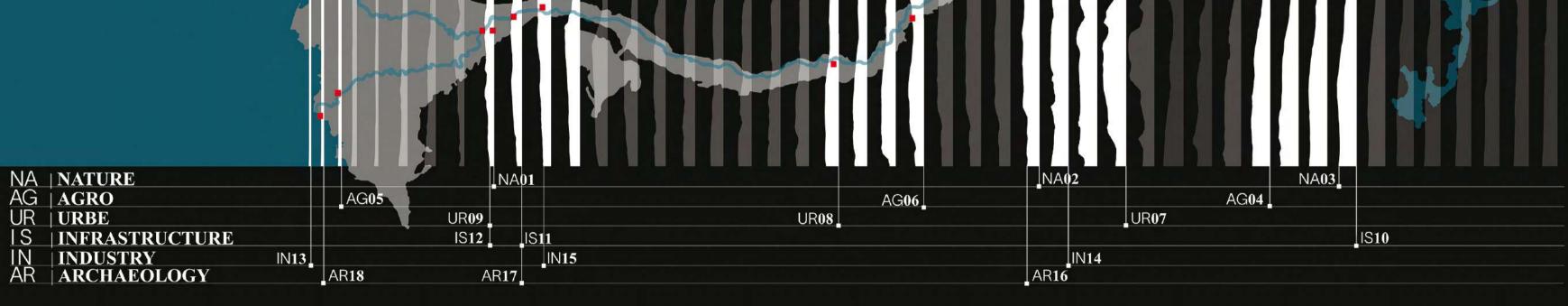
Abydos Temple – Sohag

AR\_17 Elroda Nilometer – Cairo

AR 18

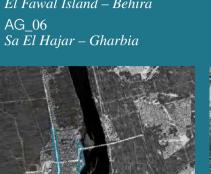
Qaitbay Citadel – Rosetta





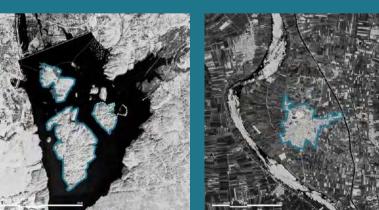
# Nature Agro NA\_01 AG\_04 Dahab Island Edfu - Aswa NA\_02 AG\_05 Karaman Island - Sohag El Fawal Isla NA\_03 AG\_06 Philae Island - Aswan Sa El Hajar











## Urbe

UR\_07
Naqada – Qena
UR\_08
Tell El Amarna – Menia
UR\_09
Downtown – Cairo







### Infrastructure

IS\_10
Naqada – Qena
IS\_11
Magra El Oyoun – Cairo
IS\_12
El Qanater El Khayreya

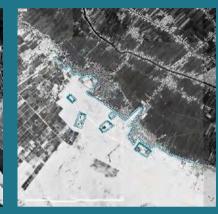
# Industry IN\_13 Ezbet El Borg – Damietta IN\_14 Naga Hamady – Qena IN\_15 Helwan – Cairo

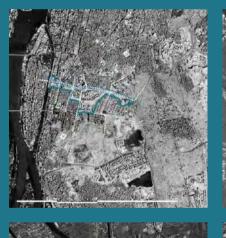
# Archaeology

AR\_16
Abydos Temple – Sohag
AR\_17
Elroda Nilometer – Cairo
AR\_18
Qaitbay Citadel – Rosetta



















The nature (flora, fauna, etc.) on the riverbanks, including its natural island reserves, holds a grand importance for the Nile and Egypt. Myths and religious forces have flowed in nature, embodied by animals that are glorified in all historical iconography with their beauty and power. However, significant climatic changes have occurred along the Nile, erasing some identity connotations due to the disappearance of animals and species that once formed Egypt's ecosystem.

NiLab Nile as Laboratory

Therefore, the vast natural system, in relation to ongoing environmental changes, must be valued and protected on a scientific, landscape, environmental and touristic levels.

The Nature Landscapes theme focuses on DAHAB, KARAMAN and PHILAE islands, located within the geography of the Nile. The project aims to repropose these islands as an opportunity for a contemporary challenge for environmental, productive, touristic and settlement dynamics in relation to their own roots and identities.

The goal of the project is to develop a vision of a natural landscape with experimental and innovative functions that can reactivate these islands.

# Nature

NA 01 Geziret El Dahab – Cairo Dahah Island

Umeå University School of Architecture, Sweden + German University in Cairo Architecture and Urban Design Program, Egypt

NA 02 A Friendly Giant for Rebalancing Nature Karaman Island – Sohag

La Sapienza University, Roma, Italy

Manchester School of Architecture + Architecture Sheffield Hallam University,

NA 03

Axis Naturae

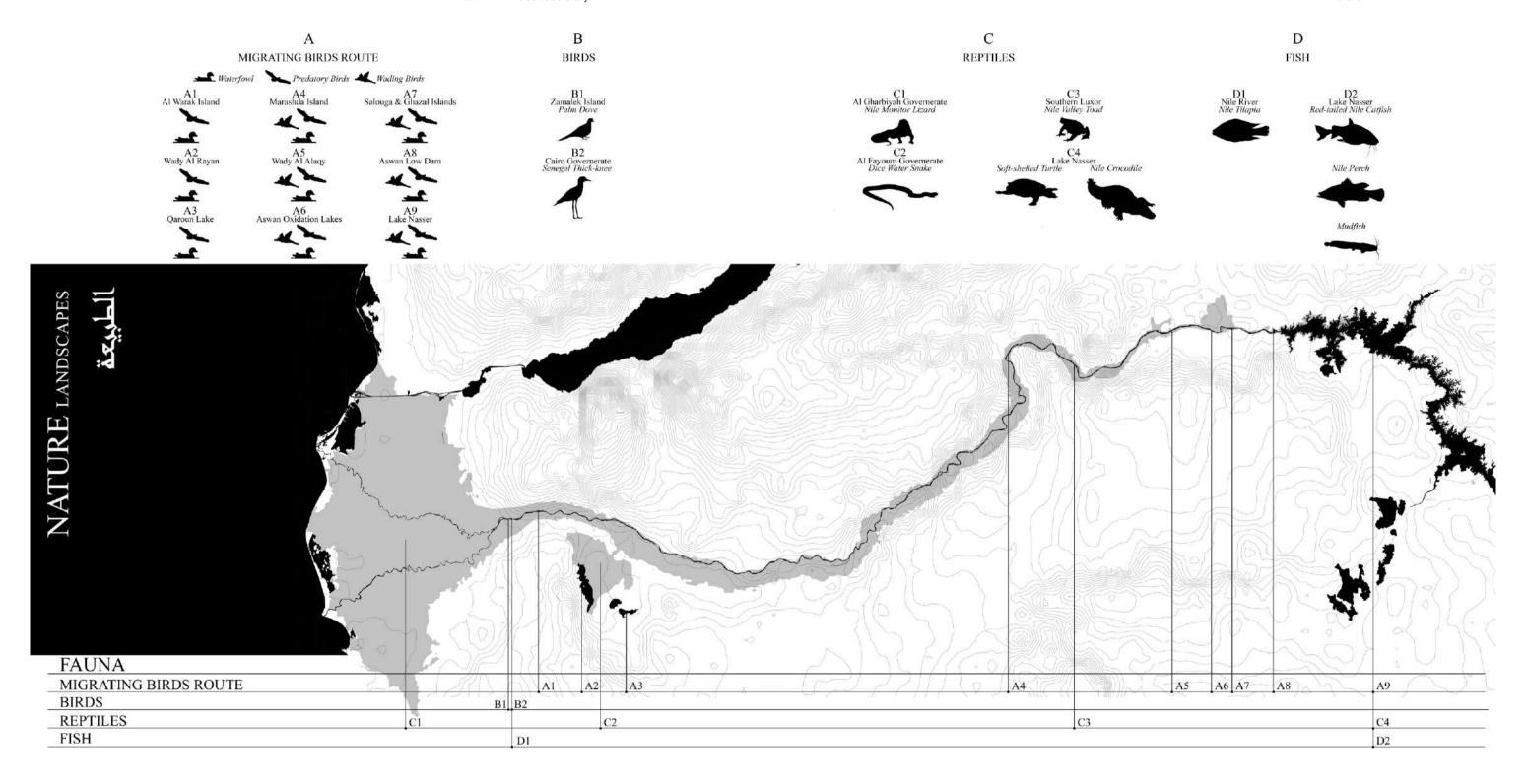
Philae Island – Aswan

39

NA



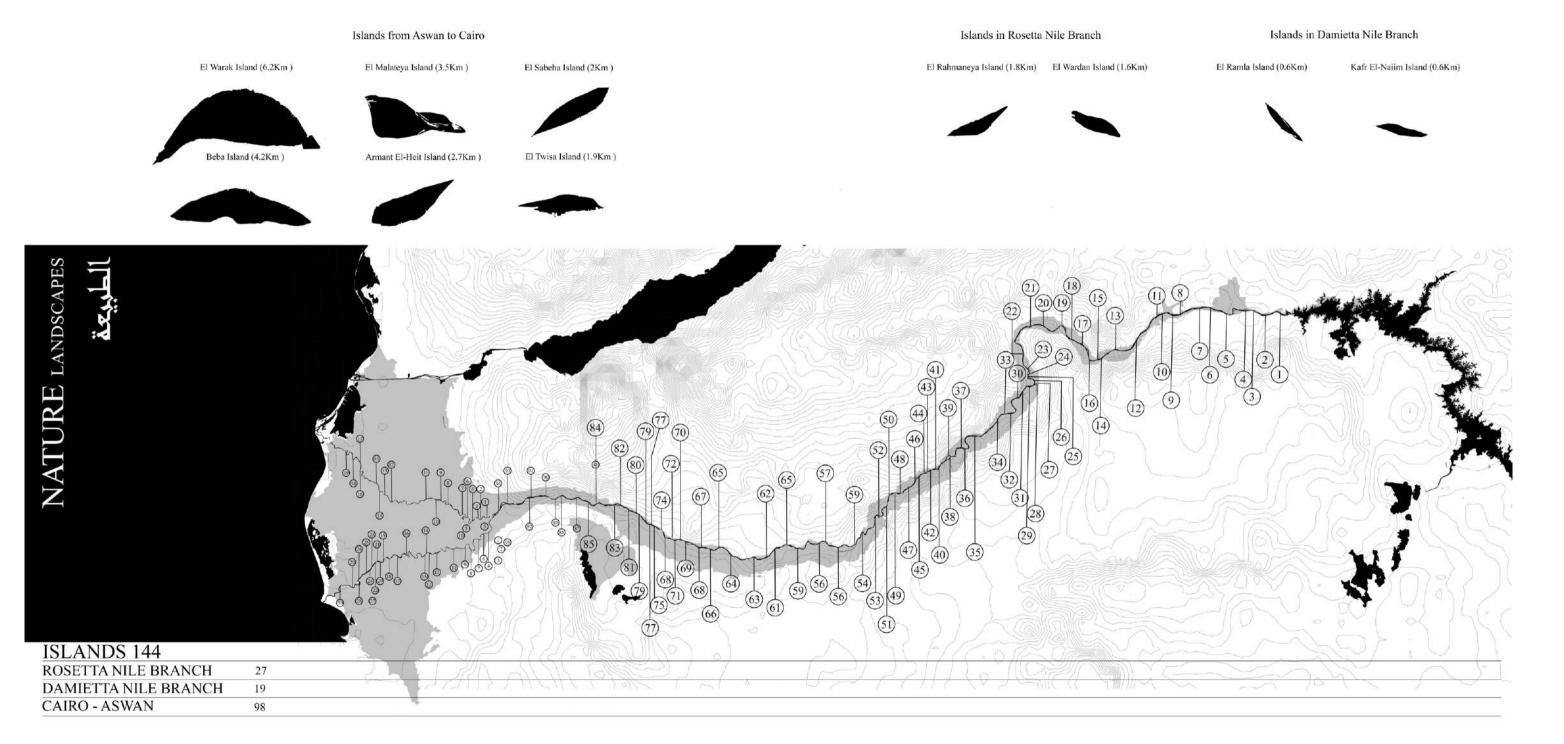
42



44

oratory Nature

47



# Dahab Island

DAHAB ISLAND, Geziret El Dahab, «Island of Gold», located inside the Greater Cairo Region, inaccessible by car and reached only by the river, is inhabited by almost 11,000 fishermen and farmers. It also accommodates Prince Nagiub Hassan Palace, alongside other scattered buildings in between the farms and crops.

Despite its proximity to urban areas, its population still has a rural nature.

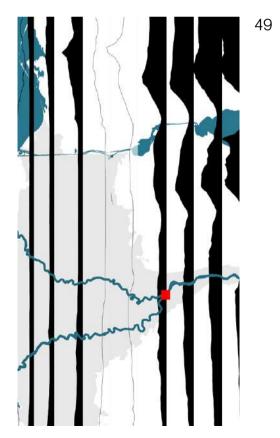
The island traces three fundamental relationships between architectural buildings and its landscape: natural and geographical components within the urban space, consolidated parameters and current forms of settlements, and with its slow construction in relation to the regional context.

The island is subject to a process of transformation of its agricultural nature in favor of the model of the globalized modern city.

The goal of the project should be to strengthen the characteristics of the island, which represents a fragment of agriculture present within a dense urban tissue. It would be essential to maintain a continuous dialogue with the landscape, the territory, and its productive conditions.

Dahab Island needs to experiment with a typological settlement scenario, where the relation between nature and architecture could define new landscape scenarios.

Therefore, a slow tourism could take place in a diffused architectural form "experiential hotel"; this could revive the island and put it as a destination and/or exodus from the polluted environments that characterize the Greater Cairo Region.





# 1 | Karam, M. Malek, Y. (2023) | Gezinet El Dahab in Context

# Geziret El Dahab – Cairo

Umeå University School of Architecture, Sweden + German University in Cairo Architecture and Urban Design Program, Egypt Cornelia Redeker, Yosra Malek

with Manar Karam, Hassan Hussein, Sara Abu Henedy, Ibrahim Samy, Bassant Adel, Ethar Amr, Youssef Ayman

Nile Islands are the remnant of the dynamic Nile Iandscape formed by alluvial deposits and shaped by currents and changing water levels. Their softembankments and dense wetland fringe offer abundant habitat to birds, amphibians, fish and invertebrates and are an important wintering ground for water birds in Egypt. On Geziret El Dahab we find many characteristics that cities all over the world are currently struggling to reinstall. How to activate the island's qualities to protect this much needed public amenity, with its abundant ecosystemic services? It is aimed to show how the needs for services and growth can be accommodated in the context of the surrounding city to avoid further urbanization on the island, while creating pedestrian and cycling connections from the felucca stops to enable safe access to public transport for all. For the island itself, a model of self-sufficiency is anticipated to ensure the protection of one of Cairo's largest green lungs and popular urban escapes.

# Karaman Island – Sohag

KARAMAN ISLAND, with an area of 500 acres, forms an integral part of Sohag in Upper Egypt, where the dynamic of the Nile River seasonally changes its contour lines in response to different water levels. Considered a natural reserve and park, it is often known as the Island of Flowers.

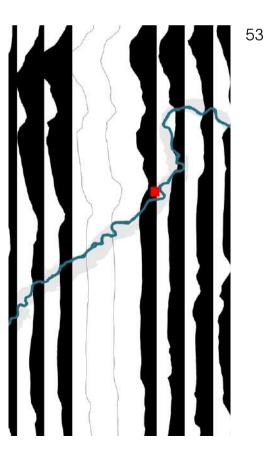
Like most of the Nile islands in Egypt, it lacks the basic necessities of life, which brought an aversion of the Sohag's inhabitants, and it became like deserted islands despite having been otherwise. Unfortunately, it became a place of informal activities.

Nowadays, Sohag's inhabitants aspire for better living conditions, identifying them by a city with a dynamic economy, efficient public services, cultural encouragement and social integration of different social and economical strata.

The quality of the natural assets could be reaffirmed through the project, since focusing on the existing environment is capable of adding value to the island.

Proceeding from the historical conservative approach, the project is a challenge to rethink the contemporary potential of the past traces integrated with existing elements for a future vision.

The idea for developing the island could be turning it into a cultural hub for the river bank inhabitants in Sohag. This transformation would contribute to enhancing the natural dimension of the island, in addition to the provision of a series of functions, which will have a great impact on social and urban scales.



# karaman Island A FRIENDLY GIANT FOR REBALANCING NATURE AGRI-FOOD/TECHNOLOGY PARK FOR KARAMAN ISLAND AND SOHAG COMMUNITY

# A Friendly Giant for Rebalancing Nature

La Sapienza University, Roma, Italy

Fabrizio Toppetti, Viola Bertini

with Elisa Donini, Giuseppe Geraci, Marco Rosati, Cristian Sammarco, Maria Virginia Theilig, Francesco Tosetto

An island is not alone. An island is the moment of accumulation and representation of a stellar geographical system that in a single fragment can trace and express the meaning of the whole, a condition that constitutes its design potential.

For Sohag, the capital that Karaman Island represents can guide future development towards a horizon of sustainability declined in an inclusive way on ecological, social, and economic levels. The program, a cultural and research centre, has been interpreted holding together nature and man work in a virtuous relationship. The proposal is a large agri-food technology park. The imagination has gone so far as to prefigure a new reality based on agricultural production, cultures, and traditions, focusing on the fertility of the earth. The result is a large ecological infrastructure capable of giving strength and incisiveness to the renewed role that the island assumes on a territorial scale. The project takes on an experimental and provocative character and is aimed at stimulating a renewed environmental awareness.

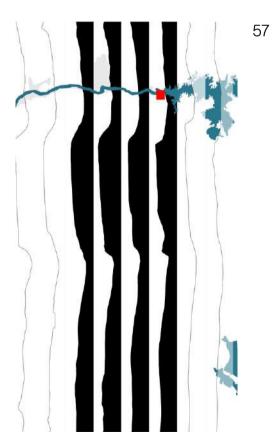
# Philae Island – Aswan

PHILAE ISLAND, Jazīrat Fīlah or Jazīrat al-Birba, «Temple Island», is located along the Nile river, between the Old Dam and the High Dam in Aswan Governorate in Southern Egypt. The conventional name (Philae) is Greek, but locally, the site is known as Qaṣr Anas al-Wujūd, named after a hero of the "One Thousand and One Nights" tales.

Before the construction of the Old Aswan Dam and its reservoir, the highest points of the island have always been unaffected by the Nile flooding, especially the alluvium- covered granite rock of Philae, with dimensions of 1,500 by 490 feet (460 by 150 meters). However, with important temples, such as Philae, and Abu Simbel, being built on lower contours, translocation has been carried out, moving them to the remaining areas of the island above the water level. The historical site currently functions as a system of three separated islands.

Philae Island is recognizable as a place of collective memory, one of the most beautiful islands on the Nile. Nevertheless, its current borders are either interrupted or isolated from each other, overlapping or contiguous with each other, stable or conflicting against each other.

Considering its borders as the focus of the design project, the system of these three islands could be conceived as an open museum. Consequently, it will recall the traces of such monumental artifacts with its historical role, which would become evident in its positive effectiveness not only on the environment, but also on the nature and landscape dimensions.



### **AXIS NATURAE**



# Axis Naturae

Manchester School of Architecture + Architecture Sheffield Hallam University, Loris Rossi. Laura Pedata, José Ángel Hidalgo Arellano, Nicolas Turchi

Axis Naturae is an imaginary vision that proposes a new order in the biodiversity in the Philae Islands and beyond that brings back the ecosystem altered by the construction of Aswan Dam. It creates a complex net of relations between nature and culture, earth and water, past and future.

As the desert conditions have intensified in the last years, it is essential to generate a new equilibrium. An infrastructure is conceived that links the Nile with different partes of Africa and the Mediterranean Sea. Connected to the axis, a series of "islands" favour new water distribution, enriching biodiversity and creating new dynamics in the territory. In this archipelago, each island becomes an oasis containing cultural, social and natural facilities that create pockets of natural species.

Axis Naturae is conceived as a timeless global spine that opens a dialogue with the existing, becoming a bridge that fertilizes the land and creates a new nature distribution, acting as a balancing system in light of the climate emergency.

The Nile has always been the most suitable location, since ancient Egypt, to grow the food needed by the riverbank's settlers. The flow of the three seasons — flooding, sowing, and harvesting —represents the space-time passage which symbolizes the life cycle of nature and people.

NiLab Nile as Laboratory

The productive aspect, linked to the native agricultural resources along the river, is joined with the landscape aspect of agricultural scenarios to present an identity where nature, flora, fauna, and human presence come together in a historical and geographical balance of primary importance.

The Laboratory focuses on three sites: EDFU, EL FAWAL island and SA EL HAJAR, territories that must be freed from the industrial and urban agglomerations to be transformed into productive areas, with proposals for different forms of inhabiting rural space. A different perception of these sites could change their destiny, becoming not only suspended areas without urban definition, but spaces that experience a dialogue between production issues, public and living spaces.

# Agro

AG\_04 Reweaving Edfu Edfu – Aswan

> IUAV University, Venezia, Italy + Future University in Khartoum, Sudan

AG\_05 City into Nature El Fawal Island – Behira

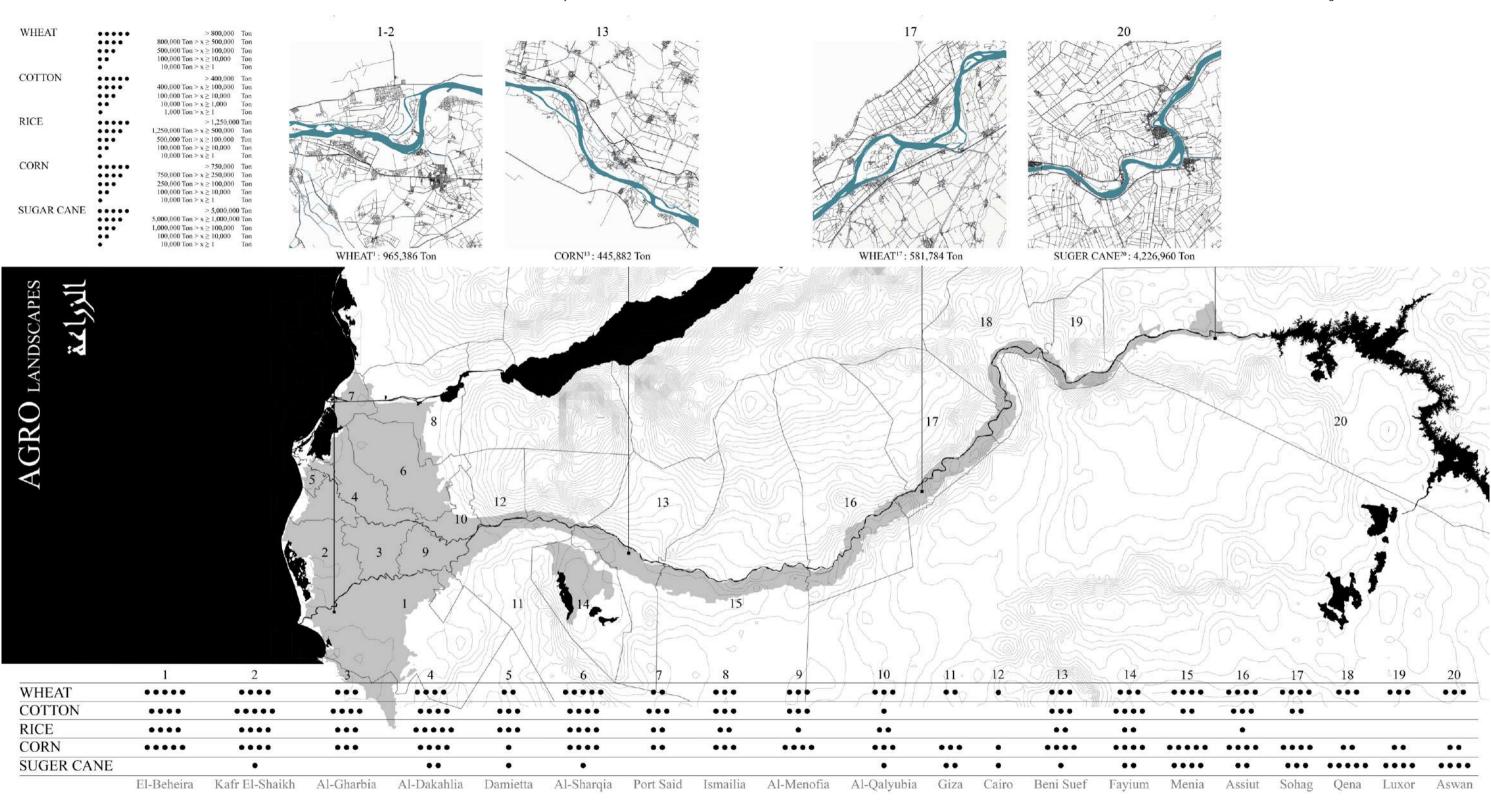
Ain Shams University, Faculty of Agriculture + Faculty of Engineering, Urban Design Department, Egypt AG\_06 Egyptian Topography Sa El Hajar – Gharbia

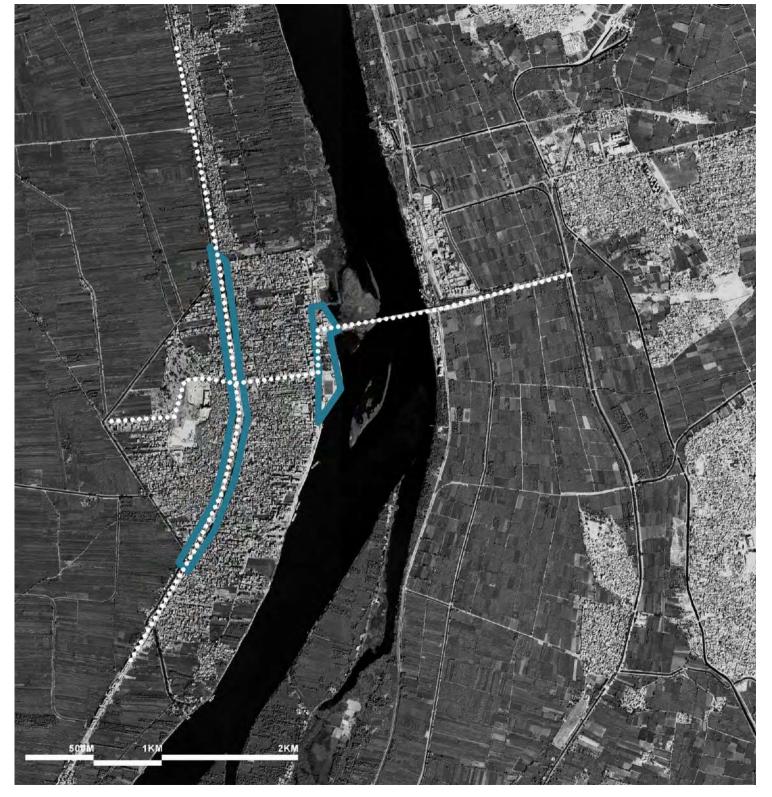
University of Camerino, Italy + University of Udine, Italy

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AG





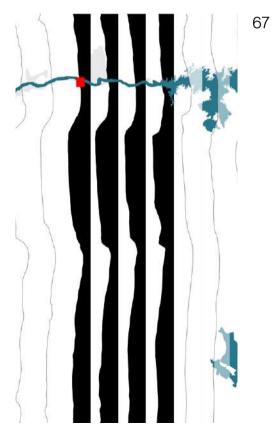


# Edfu – Aswan

EDFU is an Egyptian city located on the west bank of the Nile River between Esna and Aswan, with a population of approximately 60,000 inhabitants. It is the location of the temple of Hourus and an ancient settlement. The remains of the ancient settlement of Edfu are situated about 50 m to the west of the Ptolemaic temple. Although most of the settlement shows severe signs of erosion, some preserved areas show a cross-section of Edfu's development as a provincial city from the end of the Old Kingdom to the Byzantine period.

The compact layout of the city, along the Nile, carves out a very geometric agricultural landscape, measured by small canals and an external road network. The agricultural landscape of Edfu is characterized by the specialized cultivations of medicinal plants, linked to the pharmaceutical industry, and by fields of nationally-valuable vegetables. The project theme sets this dual dimension as the characterizing condition: agricultural landscape and urban landscape projected along the water line of the Nile.

The design proposal intends to merge the two realities, enhancing the agricultural identity vocations through exhibition and cognitive spaces. In particular, a new architectural building is thought of, along the Nile, on the site of a small sports field, to be transformed into a commercial exhibition hub for agricultural products. Moreover, a redevelopment of the main axis will be carried out, highlighting the morphology of the city, which dissolves directly into the agricultural fields. A new configuration of this axis is envisioned, through slow passages and bicycle paths with the presence of small green public spaces as fragments of local agricultural essences. In this context, the axis is repurposed as a tourist infrastructural spine capable of enabling widespread hotel actions.



# Reweaving Edfu

IUAV University, Venezia, Italy + Future University in Khartoum, Sudan Mauro Marzo, Sandro Grispan, Gabriele Catanzano, Mattia Cocozza, Robert Vicentini

The relationship of continuity between city and countryside is assumed by the project as a geometric rule for the construction of a new urban image of Edfu.

The geometries of the pre-existing land parcels, generating a sort of compositional continuity between the road layouts and the agricultural textures that embrace the body of the city, become a reference for the extension of the same green spaces and the reconfiguration of existing gardens along the Nile. According to the traditional presence of water surrounded by shading local tree species, green exhibition spaces and public places of leisure and pleasure are thus offered.

The guidelines of the agricultural textures are also a reference for the placement of buildings and green spaces along the main north-south axis that connects the old part of the city with the modern urban expansion of Edfu along the edge of the river. The dimensions, proportions and orientation of the Temple of Horus guide the definition of the architectural devices and green open spaces that overlook the Nile, accommodating the exhibition and commercial hub of agricultural products of the region.

# El Fawal Island – Behira

EL FAWAL ISLAND, one of the most beautiful agricultural islands in Behira Governorate, is located along the Rosetta branch, within the northern part of the Nile Delta. With an area of 0.1km2, it has an important agricultural role, producing various vegetables and fruits, with focus on artichokes and citrus fruits.

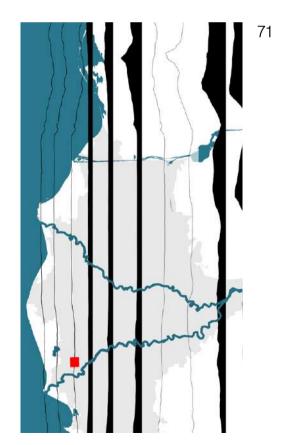
The island is known for the typical products of Egyptian agriculture like its own rice, cotton, wheat and sugar beet. Additionally, along its coasts exists significant fish farming activities.

The place is characterized by three landscape systems: the countryside formed of cotton fields, the city with its sprawling tendency to occupy agricultural lands and the island on the Nile, which remains a natural oasis alongside cotton cultivation.

The project should aim to merge these three landscapes into a unified idea, capable of identifying the essence of the place.

This way, the targeted area would constitute a real *wedge* that starts from the agricultural system, crosses the city, creating a green zone up to the Nile, where the island forms the frontal element.

Conceived to return the built system to the natural soil, the intervention area could be redesigned through a university research center on cotton cultivation. Consequently, the island on the Nile would constitute an experimental area for the research center, containing all the characteristics of biodiversity and rural archeology typical of the Egyptian tradition.



AG\_05

# City into Nature

Ain Shams University, Faculty of Agriculture + Faculty of Engineering, Urban Design Department, Egypt Mohamed Heweidy, Mohamed El-Fayoumi with Malak Hazem, Mennatallah Saleh, Mohamed Selim, Rana Shams, Tuga Galal, Yara Soliman

El Fawal Island is characterized by the confluence of three elements: agriculture related to cotton production, the river, and the ever-increasing built-up area. The progressive process of urbanization continues to consume rural areas, erasing the memory of a place historically inhabited by farmers and fishermen. The project proposes a possible coexistence between present identity elements and innovative programs on both production and housing levels.

The project proposes an agricultural research center on cotton production, modeled on the design of the fields, following the existing topography. The configuration of new public spaces connects with the surrounding landscape and the Nile to reinforce a sense of place and belonging.

The use and accentuation of the original vegetation together with the new architectural artifact, the enhancement of the rural systems design, and the revitalization of the relationship with the old water channel create the right interaction between nature and artifice, resulting in new urban and landscape configurations that enhance local identities.

## Sa El Hajar – Gharbia

SA EL HAJAR is one of the villages of Basyoun Center in Gharbia Governorate in Egypt. Its name during the era of the Pharaohs was "Sau", and the Greeks transliterated it to "Saïs", and in modern times it is called Saïs Al-Hijr.

The city has an ancient history dating back to the Old Kingdom and is mentioned in many Pharaonic manuscripts. Excavations show that the history of Sais dates back to 4000 BC. It was the capital of Pharaonic Egypt during the era of the 26th and 27th dynasties, and among its most famous kings was Psamtik I (656 BC), who formed an army and expelled the Assyrians from Egypt, and King Amun Hor.

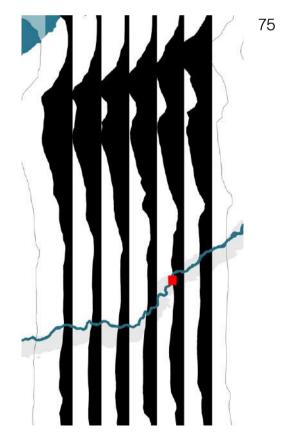
Being recognizable for its star shape, this city is found within an agricultural landscape marked by water channels and strongly geometric field plots.

This area of strong productive value in Egypt's rural economic scenario is often threatened by undifferentiated and sprawling urban development.

The project intends to reverse the city-countryside relationship, prioritizing agricultural land not only as a productive base, but also as a landscape and identifying quality.

In this sense, the project theme is focusing on the border between city and countryside, as a viable element/barrier, a sign of a possible linear park with dual effect: on the one hand towards nature and the Nile, on the other towards the built environment.

The park is characterized by a leisurely path and is configured as a narrative of the knowledge of rural systems and crops, with a concurrent exhibition for the sale of small artifacts and products.



## Egyptian Topography

University of Camerino + University of Udine, Italy

Luigi Coccia, Claudia Pirina, Sara Cipolletti, Giovanni Comi, Pietro Ferrara, Alessia Guaiani, Simone Porfiri, Ettore Vadini

The design experimentation is based on the relation between the evolution of the settlement and the specific geographical condition of the site, with the aim of enhancing its peculiarities and tracing the identity of the place.

Defining the transition between city and countryside, the intervention translates into the design of two parks.

The Green Belt unfolds along the perimeter of Sa el Hajar and is conceived as a filter space, a limit for future expansions of the built environment, by generating a vibrant open spaces interconnecting with the pattern of a dense fabric.

The Green Spindle contributes to reinforcing the figure and establishes itself as a new space for agricultural and energy production.

The design of the agricultural land is defined by parallel bands that undergo a progressive reduction in width, recalling a geometric scheme developed by Paul Klee in Monument an der Grenze des Fruchtlandes, in 1929 (meisterdrucke.uk, 2023).

Since ancient times, the banks of the Nile have been subjected to the settlement systems, from large urban agglomerations like Cairo, to small, rural villages, creating an urbanization that thrives on the presence of water. Water functions as a means of transportation, productive infrastructure (ports, canals, etc.) and tourist attraction.

However, large-scale and uncontrolled urban development, often characterized by strong contrasts and degenerative phenomena – vast slums, land occupation regardless of morphological and ecological characteristics, overlapping of productive settlements, residences and services, employment of river and sea banks as artificial barriers, a chaotic transportation system and poor management – has caused entropy and distortion of the urban quality.

An evident phenomenon is the environmental pollution present mainly in large urban concentrations, where the river is the "victim" of landfills and exploitation. A rediscovered balance between the environmental system and settlements is vital for a better future for populations and cities.

The Urbe Landscape theme suggests an exceptional reading for the three different urban contexts that have been chosen for their representation of different challenges within Egyptian urban realities. These realities are characterized by urban stratification of several aspects that shaped a multiplicity of urban conditions.

In the light of this expansion, the research attempts to study and understand the following areas: NAQADA, TELL EL AMARNA and DOWNTOWN-CAIRO.

The goal is to outline an urban decomposition and recomposition strategy that takes into account the deepest meanings and identities of these realities and potential elements for the inhabitants.

# Urbe

UR\_07 Archi-culture *Nagada – Qena* 

> Ain Shams University, Faculty of Engineering, Smart and future cities laboratory for sustainable urban solutions (SFCL) - Egypt

UR\_08 The Two Cities Tell El Amarna – Menia

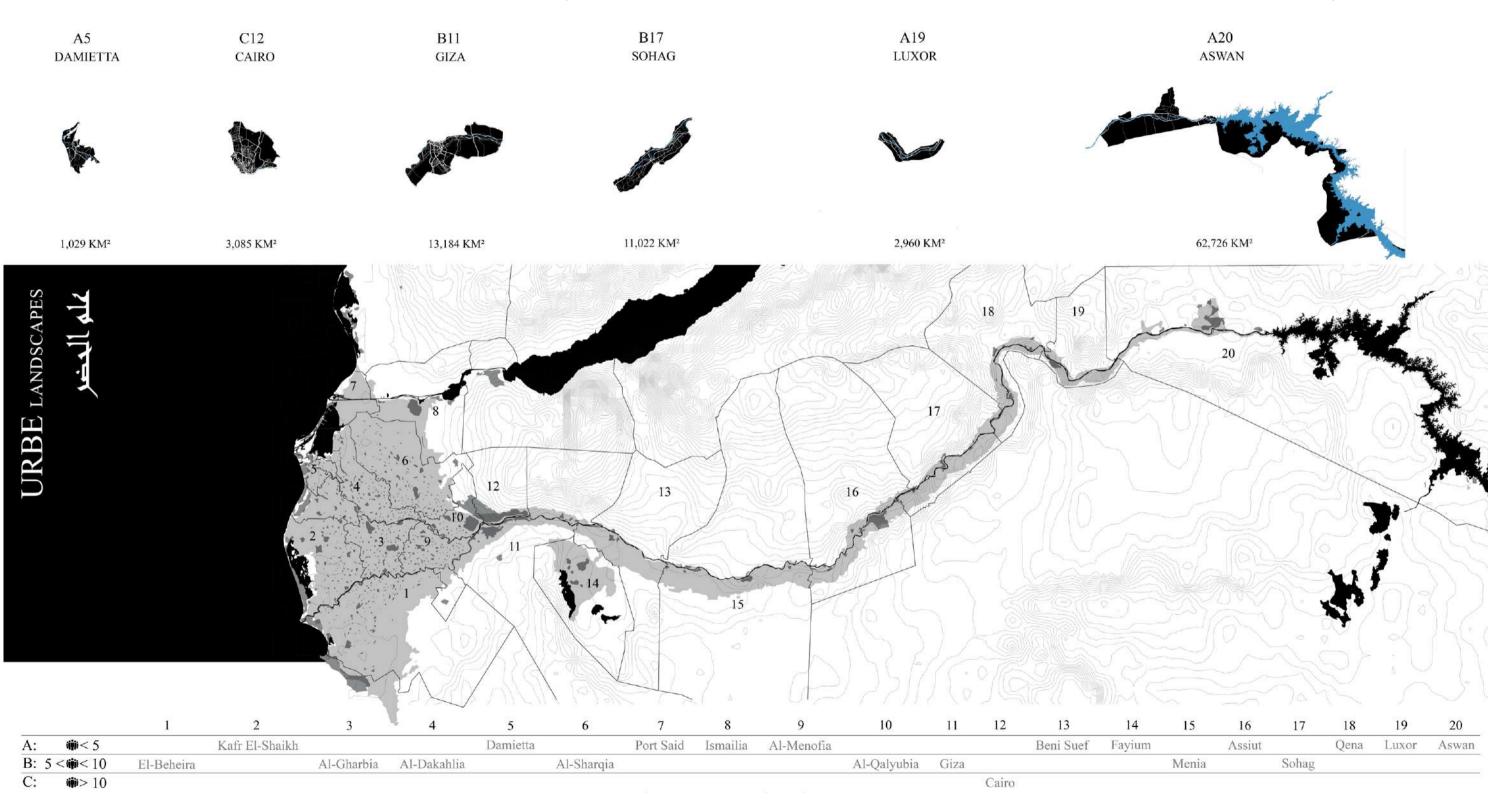
Politecnico University, Milano, Italy + Czech Technical University Prague, Czech Republic UR\_09 Operative Void Downtown – Cairo

> Mediterranea University of Reggio Calabria, Landscape\_inProgress Laboratory, Italy + Parsons University New York. US









#### Naqada – Qena

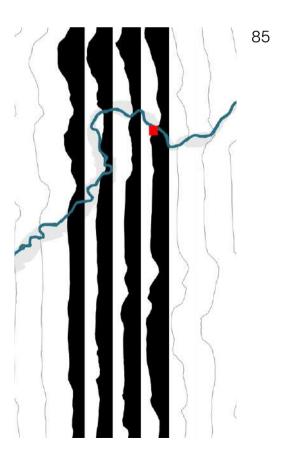
NAQADA is an Egyptian city, located on the western bank of the Nile river in Upper Egypt, near to the city of Qus in Qena Governorate. Dating back to the pre-dynastic era (before 2925 BC), it is considered one of the oldest cities of the entirety of Egypt, where the historical and social evolution of the Nile valley had begun.

The city is rich with handcraft productions such as pottery and fabric, alongside being agriculturally famous for the cultivation of sugarcane, dates, grains and diverse vegetables.

Naqada is one of the cities that could be potentially revived by developing their waterfront, through linking the corniche with three axes that distinguish the main features of the city represented by the Church, the Mosque, and the Palace.

Moreover, the Northern extremity of the Corniche could be used to establish a marina for boats and an open exhibition for handicrafts and textile products of the residents of Naqada. Connecting the old heart of the city to its waterfront would be like revitalizing its dilapidated body through the three arteries.

Thus, the waterfront project aims to develop an important part of the water banks of the city on the Nile River, to make appropriate use of the spatial potentials and to emphasize the historical importance of the place, in addition to the economic and social development of the residents and visitors.



UR\_07



#### Archi-culture

Ain Shams University, Faculty of Engineering, Smart and future cities laboratory for sustainable urban solutions (SFCL) - Egypt Samah Elkhateeb

with Donia Mostafa, Nadine Khalil, Nadine Mohamed, Donia el Boghdady

Naqada is an ancient city situated on the western bank of the Nile River in Upper Egypt, tracing its origins back to the pre-dynastic era before 2925 BC. It is a rich tapestry of culture, history, and religion, with archaeological sites such as the Naqada Cemetery and agricultural practices that have sustained its people for millennia. The city's urban fabric, designed to coexist in harmony with nature and history, reflects the wisdom of its forebears. A visionary proposal seeks to develop three main axes that intersect with the city's agricultural lands and ancient artifacts, converging at the Nile River, with sub-main axes symbolizing the city's pivotal events.

The Nile front promenade takes center stage, serving as a vibrant hub showcasing the city's agricultural products, cultural heritage, and story.

The proposed development aims to preserve Naqada's history and culture while embracing contemporary design, making it a model for sustainable development and a source of pride for all Egyptians.

#### Tell El Amarna – Menia

ELAMARANA, situated in Middle Egypt, once held the new Kingdom city founded by Akhetaten in 1347 BC., and is now located in the current-day Minya Governorate. Despite having been a narrow city, its elongated waterfront has been eliminated in favor of the cultivation performed on the river banks. The main remains are situated on the east bank of the river, bordered by limestone cliffs.

The city is the most complete example of an ancient Egyptian city, since it embraced a variety of different functions, aside from residential areas and palaces, such as ceremonial structures, administrative, industrial, and food production complexes. This way, it represents an important resource for understanding the excavation history which continues till today.

Amarna or Tell El Amarna is an extensive Egyptian archaeological site containing the remains of what was the capital city of the late Eighteenth Dynasty. The city was built in the direction of the Pharaoh Akhenaten, and abandoned shortly after his death in 1332 BC. The name that the ancient Egyptians used for the city is transliterated in English as Akhetaten or Akhetaton, meaning «the horizon of the Aten».

The location is in what is now the Egyptian governorate of Minya, on the east bank of the Nile. It lies roughly 58 kilometers (36 miles) south of al-Minya, 312 kilometers (194 miles) south of Cairo, Egypt's capital, and 402 kilometers (250 miles) north of Luxor (site of the old capital of Egypt, Thebes). To its immediate west is the city of Deir Mawas. There are a number of contemporary settlements besides Amarna, with I-Till in the north and El-Hagg Qandil in the south serving as their principal centers.

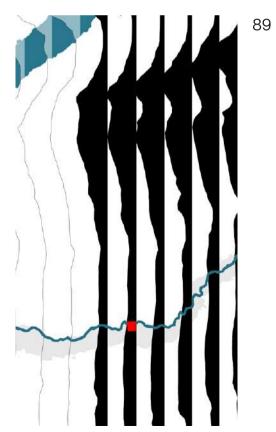
The new city has been built as a subtraction of the agricultural belt along the Nile and is attached to the vast archaeological area which, on the contrary, occupied the immediately nearby desert belt.

The two cities are divided by an arterial road, in a spontaneous relationship of indifferent coexistence, which does not show the historical archaeological potential, memory and evocative force of the place itself.

The project could face this dualism, with the aim of redesigning the border area between the two cities, together with the accessibility and tourist use services that the city and the vast archaeological area suggests.

A sort of buffer zone capable of triggering new soil development interventions would give value to the two edges, integrating architectural devices and volumes closely linked to knowing, reading and facilitated accessibility aimed at cultural tourism.





#### The Two Cities

Politecnico University, Milano, Italy + Czech Technical University Prague, Czech Republic Domenico Chizzoniti, Ondrej Cisler, Tommaso Lolli, Elisa Maruelli, Luca Preis with Dai Yichang, Liu Yudi, Qin Ya, Song Zlirong, Zakir Hussain, Ummi Fathima, Xie Wanyi

The project proposal aims at enhancing a condition of duality in the city of Tell El Amarna. The project takes this duality and emphasizes it through a dual register: by enhancing the role of the "buffer zone" between the two settlements; the modern and the archaeological. The two cities are divided by a road, in a spontaneous relationship of indifferent coexistence, which does not show the historic archaeological potential memory and evocative power of the place itself. This proposal works on this dual condition by attempting to enhance their respective identities. Along the main street axis where the two cities face each other ("The Two Cities" is the title of the Italian translation of a compelling novel published in 1859 by Charles Dickens), the project moves on two different levels: on the one hand, it takes on the structure of the recent urban fabric by working by subtraction, through the combination of "urban rooms." These rooms, designed as urban voids, intend to fulfil the request for public services and collective functions that can support the endowment of accessibility services and tourist enjoyment as a necessary condition to improve accessibility to the wide archaeological area. On the other, it moves to redesign the margin of the archaeological city on the opposite side of the road as an element of continuity between the existing urban structure and the ruins.

#### Downtown – Cairo

The project area is located in the heart of the consolidated city of Cairo, close to the historical center.

Characterized by the expansion of the nineteenth-century city, it was certainly influenced by European and Western urban planning culture, both in the urban layout and in the architectural language.

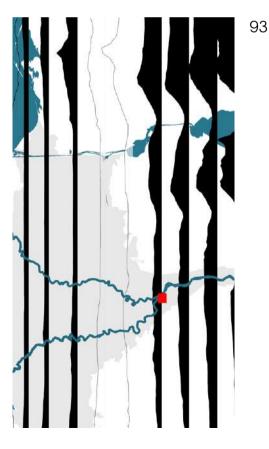
Historically, it has represented a business district with the headquarters of the major government buildings and true monumental poles of the urban layout.

The new political and urban planning of the city aims at the delocalization of these functions, posing the question on the use and future of the existing monumental artefacts and more generally on the vocation of the area itself.

The reflection of the design starts from the proposal of generating punctual urban voids and reviving functions and activities for this part of the city, rediscovering public open spaces and more adequate urban standards - green areas, parking lots, pedestrian paths, bicycle paths.

This, together with the recovery of the historical monumental artefacts which are the only constrained elements, and the inclusion of the function of a Hub as a technological innovation centre serving small businesses, will form the goal of the project.

The idea is to bring together punctual elements to be recovered and to have new land use, capable of looking at the memory of a place that, until the early 1800s, was characterized by vast green areas and the presence of small lakes.



UR\_09



## Operative Void

Mediterranea University of Reggio Calabria, Landscape\_inProgress Laboratory, Italy + Parsons University New York, US Ottavio Amaro, Marina Tornatora, Moataz Samir, Cristiana Penna, Eric Franklin Romeo, Maria Lorenza Crupi with Matteo Milano, Arwa Ehab Abbas, Malak Haytham Weshahy, Wegdan Hossam Faydullah, Yomna Walid Ali, Menna Medhat Qubtan, Omar Mohamed Elnamer, George Rafik Azer, Esraa Ahmad Farrag, Sara Amr Kandil, Zena Zahran

In the current processes of decentralization in the city of Cairo, the imaginary project is conceived as a reflection and as a cultural action for new urban visions that interact with the ancient city and the contemporary need for sustainability.

The gaze is turned to understand the implicit formulation of Cairo's historical urban fabrics, to present a new urban organism capable of resuming settlement morphologies in which interior-exterior mediation is found. This piece of the city is restored to its condition as an *internal void*, where only the pre existing monumental buildings are retained, intended for museum, institutaional forms and cultural services, and some road layouts connecting with the existing city and the Nile.

The aim of this project is to reactivate a sense of belonging to an idea of space, to its distributive principles, through the construction of an edge/enclosure, which redefines the relationship between solid and void, architecture, green spaces and water. The primeval union with water is reflected in the avenue-promenade that leads from the great void to the river's edge, an explicit reference to the historical dependence of settlement systems on the Nile.

The Nile is the reason for the birth of the Egyptian urban system, from the vast metropolis of Cairo to the small towns along its banks. Natural and artificial canals have facilitated the urbanization of the territory, starting from the Pyramids of Giza up to the present day.

NiLab Nile as Laboratory

The river itself has represented the crucial infrastructure that has favored and still favors transport, commerce, tourism, and internal trade. Above all, port infrastructures represent important nodes for trade, not only domestically, but also internationally, starting from the Mediterranean countries.

NiLab focuses on three key sites: HIGH DAM, EL QANATER EL KHAYREYA and MAGRA ELOUYON AQUEDUCTS, which have always been significant infrastructures along the Nile. These infrastructures have shaped and reshaped landscapes over time, generating fragments and residues, that represent an opportunity for design reflection. These main infrastructures provide an opportunity to rethink and reinterpret the relationship between architecture, city, and landscape on the banks of the Nile. The reflection is on how to regenerate, reuse and recover the quality of urban life through a new vision of the fragile landscapes associated with these sites.

# Infrastructure

IS\_10 Inclusions in Another World *High Dam – Aswan* 

University of Camerino, Italy + University of L'Aquila, Italy

IS\_11
Between the Infrastructures:
Light, Water and Public Spaces
Magra El Oyoun – Cairo

Évora University Architecture, Portugal + IUAV University, Venezia, Italy IS\_12
O.A.S.I. KE-MET –
Infrastructure of Living World
El Qanater El Khayreya
– Shubra Elkhema

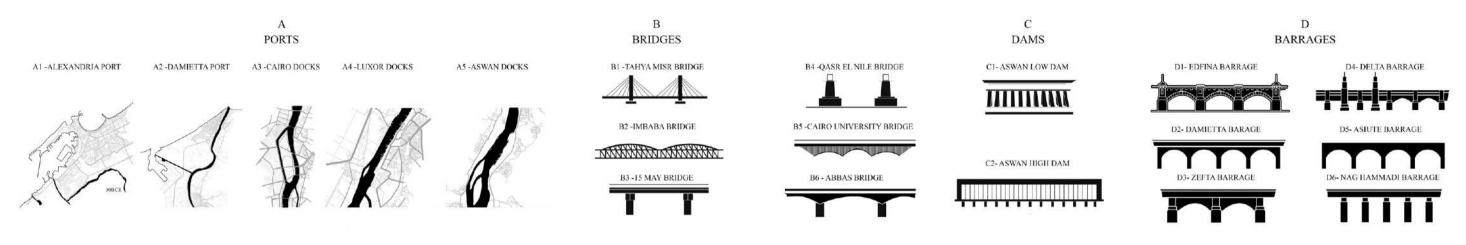
Federico II University, Napoli, Italy + ENSA Paris Malaquais + ENSA Strasbourg, France

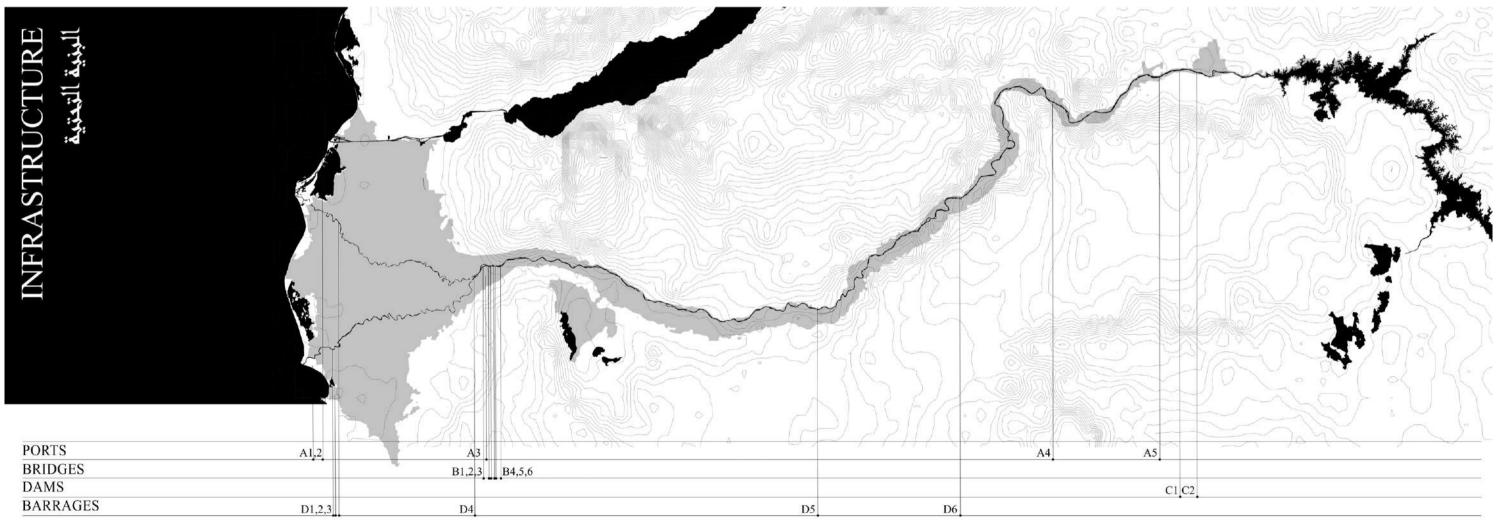
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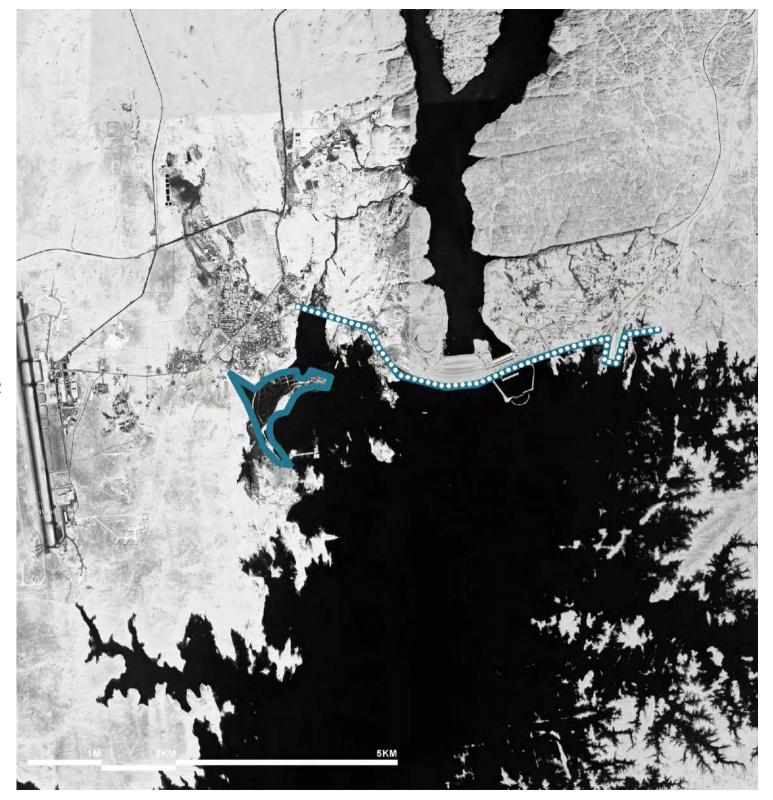
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#### High Dam – Aswan

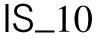
HIGH DAM is one of the world's largest embankment dams, which was built across the Nile in Aswan, Egypt, between 1960 and 1970.

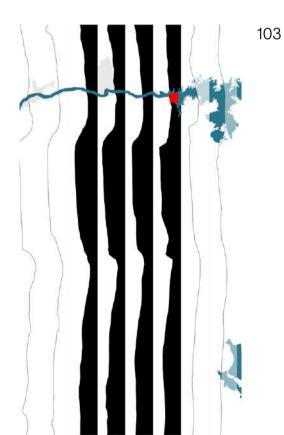
Its significance largely surpassed that of the previous Aswan Low Dam, completed in 1902 downstream. Based on the success of the Low Dam, then at its maximum utilization, construction of the High Dam became a key objective of the government following the Egyptian Revolution of 1952. With its advanced ability to control flooding, to provide increased water storage for irrigation and to generate hydroelectricity, the dam was seen as pivotal to Egypt's planned industrialization. Like the earlier implementation, the High Dam has had a significant effect on the economy and culture of Egypt.

Benefits aside, the High Dam transformed the surrounding area into an acidic fragmented territory hosted by surveillance and anonymity as a certain condition of consciousness. In a silent scenography, only the great artifact is present, which has generated the Lake Nasser: a unique nature. However, the dwellers remain in the background. An important question to be posed is if the mega infrastructure is the only means of expression of architectural reality. The focus is mainly on this system composed of assembled fragments, a metaphysical unity that highlights the importance of the protection of the South.

A strong intervention could be the solution to sensing an overall design; polemical consideration could provide an understanding of the mutating identity of an infrastructure, and could turn the attention to ways of defining these generated fabrics. It is a product of vague metamorphosis that is leaking dependability and consistency of superficiality in this territory.

The objective would therefore be creating an architectural paradigm, retaining fragments generated by the Dam and establishing a research center that ensures the balance between nature, urban and infrastructure. In this light, the result is awakening an archaic order beyond the mega infrastructure and bestowing an added prestige upon the High Dam.





#### THE INHABITED DAM

#### DESIGNING THE THREE ECOLOGIES

Our field of action is a highly complex living system. It is an artificial product of a long-term co-evolution that involves communities and the environment. In this human environment, architecture can be read as a sort of space of interference which is now being asked to respond to the demands imposed by a renewed concept of ecology. The term ecology does not intend to express the usual meaning given to this word, as something that has to do with the protection of environment, but rather its proper meaning, as something that gives form to the environment. It is the product of a profound integration of geography, climate, economy, demography, technique, art and culture. A systemic relationship.

complexity that requires the interaction of different knowledge. All of this implies a real paradigm shift in our culture which is steeped in reductionism and determinism. It is a new paradigm that aims at reasoning for evolutionary relationships between elements that define a system. An ecological system is an interactive system in which not only the landscape but also the topography, not only the natural components and relationships but also the artificial ones are fundamental.

The project defines three different ecologies, each one is independent from the others but evolves according to similar rules.

#### Inclusions in Another World

University of Camerino, Italy + University of L'Aquila, Italy

Luca Galofaro, Stefania Manna

with Rok Kuzman, University of Ljubljana, Slovenija

In Aswan, the infrastructure (High Dam) has created a radical transformation of the territory, contributing on one hand to controlling the geography of the region, with the related social and economic benefits, but on the other hand to the modification of the landscape and the settlements.

While keeping the technical aspects of the infrastructure unchanged, our imaginary project is focused on regenerating the environmental quality of the ecological system rather than proposing a settlement design for the territory.

It is necessary to learn how to use these geographical forms, ecologies that are very different one from each other, learning to look at them in order to be able to accommodate their transformations.

For this precise reason our three ecologies: the desert, the river and the infrastructure must not establish a relationship of interdependence but they must maintain their own autonomy to introduce an equilibrium for the selected area.

## Magra El Oyoun – Cairo

MAGRA EL OUYON is an aqueduct constructed in 1312, starting on the banks of the River Nile, and reaching Salah Eldein Citadel. Connected to the Nile River, feeding off of its water, and nurturing Cairo, the growing organism it served as a connector.

Helpless against the clutches of time, it was rendered useless; morphing into a separator, the aqueduct interrupts Cairo's urban fabric. A representation of the past, it lays suspended alongside the Nile River throughout time and space.

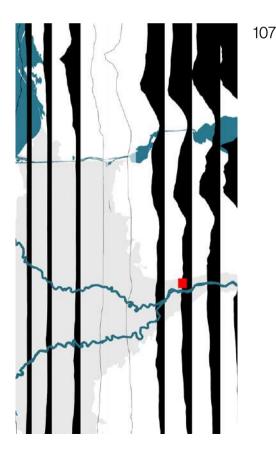
Magra El Ouyon is critical considering its changing identity and diverse interweaving fabrics surrounding it. Showing dependability and consistency of the superficiality that defines Cairo as a product of vague metamorphosis, it thus manifests Cairo's collective memory as realities.

Magra El Ouyon could be an area for interventions on a morphological level, but also on a socio-spatial organization. This could enable people to reinvent new identities in relation to their place of dwelling. Such metamorphosis could propel a process of urban regeneration and reuse of urban abandoned spaces.

In addition, this could contribute to reforming relationships within a city's complex structure to cultivate a shared spatial sense, fight segregation and reinvent a new urban identity.

Magra El Ouyon is an artifact defined as a border between two different fabrics, formal and informal, as a significant separator that has lost its original purpose, leaving space of no man's land, but also as potential and new possibilities.

These spaces are associated with a strong sense of opportunity, where concepts of memory, time and space become key-elements of urban regeneration.



IS\_11



# Between the Infrastructures: Light, Water and Public Spaces

Évora University Architecture, Portugal + IUAV University, Venezia, Italy

João Magalhães Rocha, Marco Ferrari, Jorge Duarte de Sa with Antonio Luis Alves, Claudia Sofia

The project for the Magra El Ouyon area proposes a new hybrid infrastructure that enhances the ancient aqueduct by offering new public spaces to a city that is drastically devoid of them. At the same time, it attempts to answer to major environmental emergencies that Cairo has been facing today (the ever more urgent shortage of water, air and water pollution and the energy crisis) and wants to be an asset for intervention at a city's morphological and socio-spatial level.

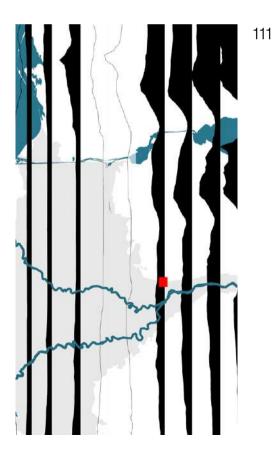
The planned actions have the precise ambition of transforming the aqueduct and the large void in the center of the Magra El Ouyon area into the scenario of a new urban life and are structured on three physical and conceptual levels: light (through a solar aqueduct), water (through a basin that doubles the image of the aqueduct) and public spaces (through a linear path and a group of public squares).

# El Qanater El Khayreya – Shubra Elkhema

The aqueduct of EL QANATER EL KHAYREYA is one of the most important renaissance projects carried out by Muhammad Ali in Egypt. The aim behind its establishment was to improve the quality of agriculture by developing the irrigation system in the Delta region. It is considered one of the greatest constructions of the modern era in the field of irrigation engineering.

El Qanater El Khayreya gravitated life along the hanging banks of the Nile, resisting the cataclysmic forces brought by the progression of time. It witnessed the rise and fall of existing regional civilizations and artifacts through the different events of the time. This infrastructure could perhaps nurture a strong productive identity, together with reviving historical memories, to weave the complexity of urban structures on the banks of the Nile.

The area needs a physical gaze to go beyond dimensions of time; El Qanater El Khayreya takes up the role of a manifesto of collective essentials; portrayed as an identity born throughthe collision of internal and surrounding external structure. As the enactment plays out, It is a motivated spirit that consistently morphs by bumping into a multiplicity of structures and matters folding infinitely in the form of urban, agriculture and landscapes. This infrastructure is intended to expand the vision of this area through a gate on the Nile generating the two branches of the Nile; Rosetta and Damietta. A multiplex of morphological structures could be accompanied by a touristic Nile port that could, once again, boost the complex area through local intervention with a regional reflection.





# O.A.S.I. KE-MET – Infrastructure of Living World

Federico II University, Napoli, Italy + ENSA Paris Malaquais + ENSA Strasbourg, France Orfina Fatigato, Angela D'Agostino, Christelle Lecoeur, Mathieu Mercuriali, Giuseppe D'Ascoli, Giovangiuseppe Vannelli

with Simona Capaldo, Francesco De Falco

In El Qanater El Khayreya a water basin, located between a dam and a bridge, measures a triangle of land at the confluence of the Damietta and Rosetta river branches. The project looks at the Nile's governance, proposing the establishment of a 'river assembly'.

Biodiversity transects are built into the desert and the agricultural landscape: starting with water, echoing the sense of the fertile *Kemet* and reinterpreting the 'well-being bridges'.

The infrastructure is thought to project material culture and local know-how into a future of tourism, biodiversity, and agriculture.

The triangle is designed as an oasis between water and land where an architecture made of bricks, reeds and tents is composed. Volumes, open spaces, pergolas, and devices are dedicated to tourists, researchers, and the living world.

The waterways are redefined as a new tourist port, and piers and rafts are hooked to the crossing infrastructure, as potential places of reconciliation between the Nile, communities, and wildlife.

Industry along the Nile has been the origin of urban development since ancient times. The river banks have always embraced productive systems, becoming a means for commerce, trade, transport and various economic activities. However, inappropriate exploitation of the river, such as using it as an industrial landfill, requires significant interventions of redevelopment and reconversion, starting with respecting the Nile water and facilitating the river's resilient recovery.

NiLab Nile as Laboratory

In particular, NilLab focuses on three large industrial areas on the Nile, EZBET EL BORG, SUGAR CANE FACTORY and HELWAN CEMENT FACTORY. These sites pose complex challenges within the urban fabric, generating a multifaceted situation that intersects temporality and spatiality without a unitary vision. The objective of the Laboratory is to develop proposals capable of imagining the reconversion of industrial areas and the production system through a new landscape and urban vision.

# Industry

IN\_13 City of Boats Ezbet El Borg – Damietta

Kore University, Enna, Italy

IN\_14
Retrofitting [Industrial] Ecologies
Naga Hamady – Qena

Faculty of Architecture, Ss. Cyril and Methodius University, Skopje, Macedonia IN\_15
From Concrete to Nature.
Green Industries Headquarters
for a Renewed Development
of the City
Helwan – Cairo

University of Parma, Italy

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E3

## Ezbet El Borg – Damietta

EZBET EL BORG, located in Damietta, at the meeting point of the Nile and the Mediterranean Sea, has been a strategic area in ancient times. A center for Egyptian woodworking, it was home to Egypt's oldest shipbuilding arsenal. Through investigation, this prototype was found to intertwine both the craftsmen and the landscape.

The vast naval area has modified both the urban and social dimensions as well as generating a fracture in the consolidated structure of the city. The area, bordered by large buildings, where a ruined fortress dating back to the Islamic era emerges, today must be recovered through a new dialogue with the nature of this place and the presence of the Nile River.

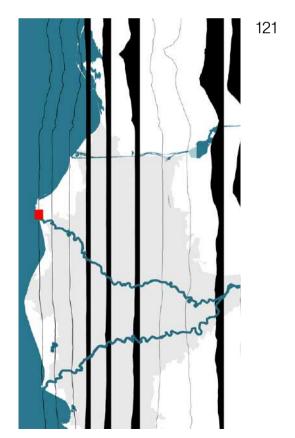
The question here is how to define the new relationship between the industrial productive forms, the ruins, the Nile and the integration with its urban context. Understanding the productive forms could recognize this and new structures intended to connect between them.

Placed at the starting point of the Nile, the city has a strong touristic and manufacturing vocation, especially in the shipbuilding sector of yacht and tourist boat construction.

The project area, characterized by a linear part along the Nile and a part inside the productive area, is the result of urban processes of hybridization, where valuable archaeological areas (Islamic period) with tourist/residential settlements, and industrial activities coexist.

The project proposal could aim at redeveloping the waterfront fragment placed between the archaeological area and the industrial zone, through recreational and tourism- oriented devices and the construction of an exhibition pavilion serving local boat production. Therefore, the project is asking to improve the economic and productivity of this area in relation to its landscape, where it could be a chance to enhance once more its heritage by generating a yacht Expo that could revive the urban context.

The project could think of a structure capable of enhancing naval products, on a national scale and, above all, on a Mediterranean scale.



IN\_13



## City of Boats

Kore University, Enna, Italy

Gianluca Peluffo, Domenico Faraco

with Gabriele Filippi, Antonio Lagorio, Paola De Lucia

The project for the Touristic Harbor and Yacht Expo bases its theoretical and figurative assumptions in the sentimental and physical evocation of the imagery of the place in its closest and unifiyng relationship between the boats and the Nile throughout Egypt and the river with the land. The many boats at Ezbet el Borg testify to this very deep relationship: the largest fleet of fishing boats in Egypt (1% of Egypt's population), including boats of the traditional felucca type (from the Arabic falu:ka; in turn from the Greek epholkion "palischer, lifeboat"). The image of the "felucca", lying along the shore, is inscribed in a mnemonic way in the image of the place, relating the artificial object that is the result of human construction and brilliance, the boat, to the original form and characters, natural and vegetal, found along the Nile shore. The design for the Touristic Harbor and Yacht Expo attempts in its image of numerous sails, lying along the artificial canals and docks, that make up the shape of the new port, to evoke in an iconic, symbolic and archetypal way the image of the city of boats, in the strong relationship between anthropization and landscape. The invention story that is the subject of the paper is the narrative mode of literary restitution of this relationship.



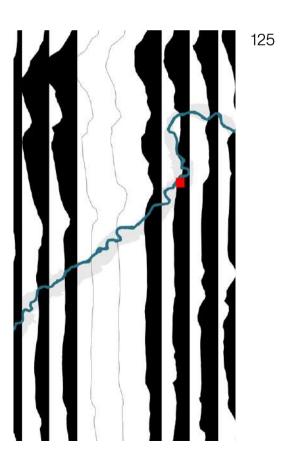
# Naga Hamady – Qena

The city is characterized by its dual productive vocation: agricultural and industrial, closely adjacent to the Nile river.

The former is related to sugarcane production and processing; the latter to aluminum production.

The sugar factories have been allocated along the banks of the Nile since 1896, bringing sugar canes from the agricultural areas of the Qena government. The city is also considered one of the largest exporters of sugar in Egypt, along with dark molasses which is a byproduct from sugar production.

The aim of project proposal could be supplying the area with directional and commercial devices and equipment to support the production system. Being related to the construction of a point tower system, the idea does not, on one hand, subtract agricultural land and on the other hand mediates as a beacon and signal in the surrounding landscape.



IN\_14

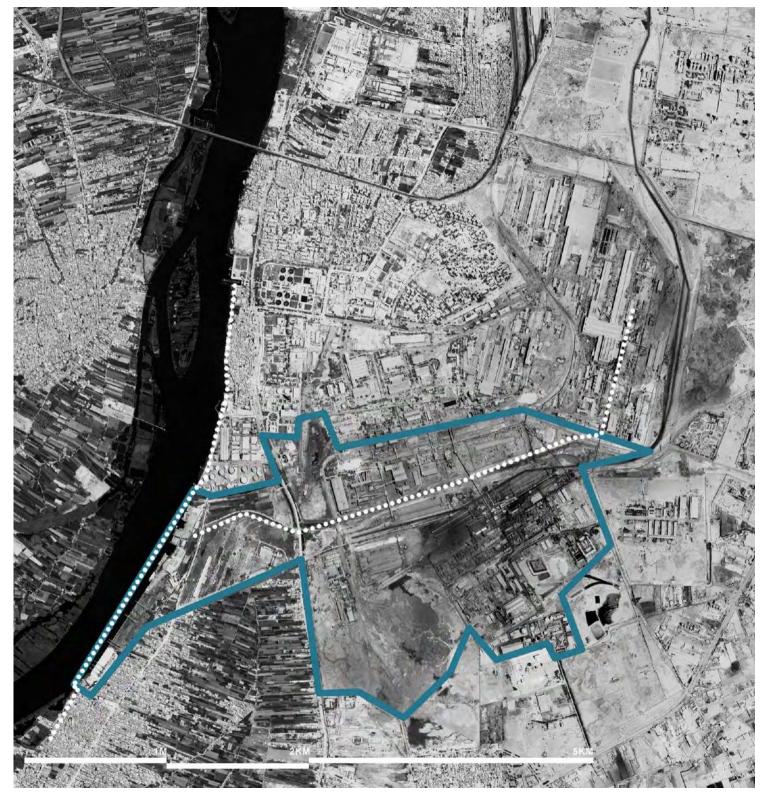
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## Retrofitting [Industrial] Ecologies

Faculty of Architecture, Ss. Cyril and Methodius University, Skopje, Macedonia

Blagoja Bajkovski, Marija Mano Velevska, Slobodan Velevski, Goran Mickovski, Ana Rafailovska with Tamara Djerkov, Mila Gavrilovska, Dimitar Milev, Frosina Stankovska

The design proposal for Naga' Hammadi Sugar cane factory, located in Upper Egypt on the west bank of the river Nile, does not question its production continuum and economic legitimacy, but looks at the possibilities to surpass the negative impact that the current operation mode brings to the surroundings, referring mostly to air pollution and occupation of agriculturally appropriate land. The proposal for a new development on the river bank takes on the productive character of the site and retrofits the existing system, resulting in a stripe of eco industrial and technological park used as a tool for transformation of the industrial site into a vivid urban environment. The park is envisioned as an open and adjustable system with its components ready for further retrofits to meet new production and environmental requirements, while the generic nature of the intervention advocates multiple possibilities for such prosthesis to emerge and act in different contexts.



#### Helwan – Cairo

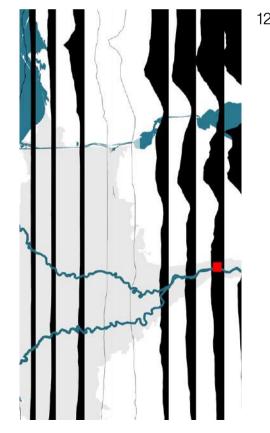
HELWAN Cement Factory is one of the largest Egyptian factories established in 1929, and the second cement producer to enter the Egyptian market. Later, it became one of the pioneering factories of the white cement industry in the Helwan region.

Helwan Cement Company 30 km away from the capital of Egypt – Cairo, is connecting the Nile Corniche from the Tora to the highway. Nevertheless, the factory has housed more than 2000 families. There is a vast number of residents of the region who prefer to shut the factory down rather than running it, as the operation of the factory was causing great pollution to the region. In addition to the exposure of many to bouts of shortness of breath and chest and respiratory diseases, and a large number resorted to changing their place of residence due to exposure to respiratory diseases. The area was before a destination for meditation and curation from some diseases and nowadays became one of the most polluted places in Egypt.

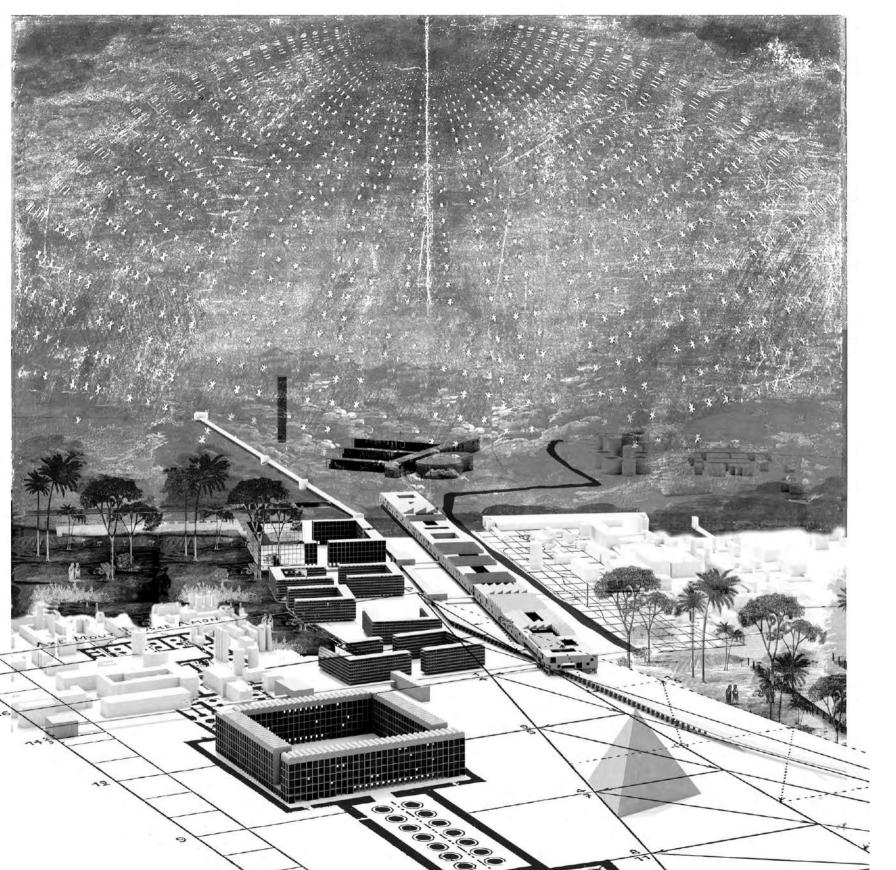
Helwan factory has shown the impact of the discontinuity and fractures, which the autonomous development could create a problem if the complexity of the project is not considering diverse aspects. In this sense the design reflection should understand these disposal areas where the double effect of the economic growth has been accompanied with a crisis in both urban and social aspects that really need a radical intervention.

The objective of this project is to reconsider the use of the site by transforming the existing buildings into more sustainable and green innovative industries, as well as the threshold between the industrial and the urban area. Establishing activities that are targeting green and sustainable products such as chips and electronic boards which, in accordance, will revive the Helwan Cement Factory both socioeconomically, and above all environmentally, and hence the whole context of the city. This Paradigm will improve the quality of urban life, the surrounding agricultural lands and the inhabitants way of living, besides, it could benefit from the direct connection to the Nile.

Within the area historically compromised by the cement industry, the project would be part of the idea of productive reconversion, through transition to a green economy. In elaboration, the existing buildings will be used as industrial archaeology, within the new function as a center for research and technological innovation in direct connection with the Egyptian university system. The area to be reclaimed will thus be able to start a process of renaturation and integration with the urban system and the Nile.



#### IN\_15



# From Concrete to Nature. Green Industries Headquarters for a Renewed Development of the City

University of Parma, Italy

**Enrico Prandi** 

with Giuseppe Verterame, Riccardo Rapparini, Alessia Simbari, Luca Bosco

Between reality and invention, this project builds an articulated and complex narrative (as a good project always does between history, art and symbol. Starting from the Nile, the project aims to direct the transition from a heavy industry to a green, low-polluting industry that encourages sustainable development.

The composition uses the tool of the grid taken from industrial plants to relate existing and new projects. It is set up on architectures/large territorial figures that merge with the industrial pre-existences through a system of mechanized elevated paths.

The Headquarters project consists of management center, technological research and development center, special residences and collective services.

In the open space the green system merges into the park of nature and biodiversity. The water system and the photovoltaic park allow for sustainability from an energy point of view.

Even the figurative language of the project distances itself from a certain imported internationalism, connecting rather to the specific characteristics of Egyptian architecture in a contemporary key.

IN\_15

Archaeology along the Nile forms the identity that has influenced the development of human civilization on the planet. Tombs, temples, and cities are the heritage of humanity that has always interacted with the presence of the Nile and the life that had developed along its banks. From villages and monuments fighting against the floods of the Nile, to those built on hills, to towering pyramids in the desert: a disseminated heritage is witnessed, narrating the stories of the land through cultural, civil, and religious aspects.

NiLab Nile as Laboratory

The theme of Archaeological Landscapes focuses on three areas: ABYDOS, NILO-METER and QAITBAY CITADEL. The intention is to configure interpretative strategies capable of relating to contemporary cities and landscapes, and to develop a vision of cultural fruition.

# Archaeology

AR\_16 Abydos, Act of Palimpsest Abydos Temple – Sohag

Grenoble School of Architecture, France + Ain Shams University, Cairo

AR\_17 Gardens of Nile and Archaeological/Ecological Park Elroda Nilometer – Cairo

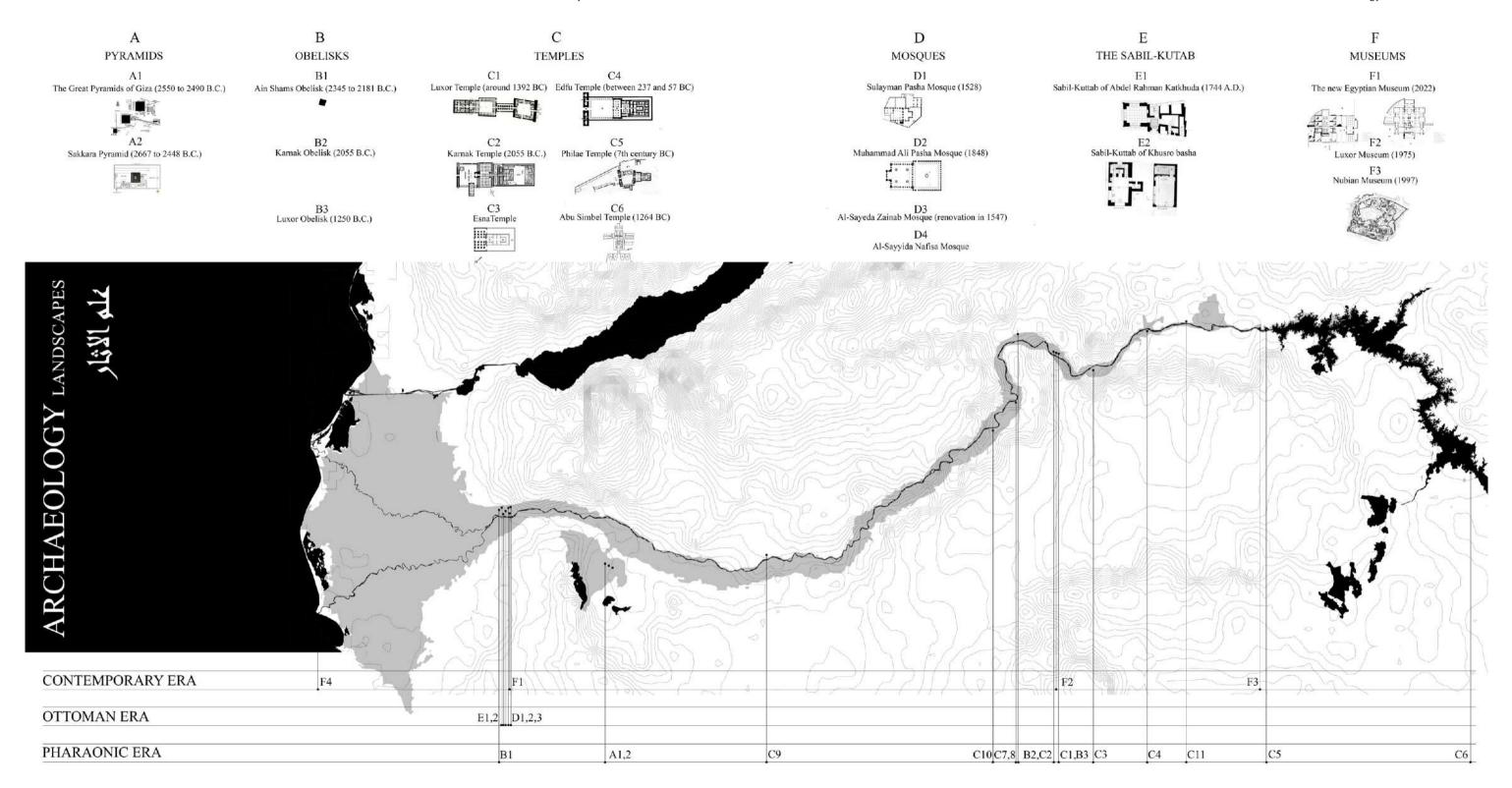
Valladolid University + Sevilla University, Spain AR\_18 Floating Institution *Qaitbay Citadel – Rosetta* 

University of Palermo, Italy

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## Abydos Temple – Sohag

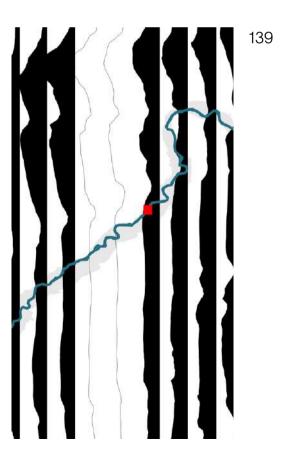
ABYDOS is located in Upper Egypt, about 10 km from the Nile River. It was a necropolis for Egypt's earliest kings and later became a pilgrimage center for the worship of the god Osiris. It is also where the cults of the deified kings of ancient Egypt were celebrated.

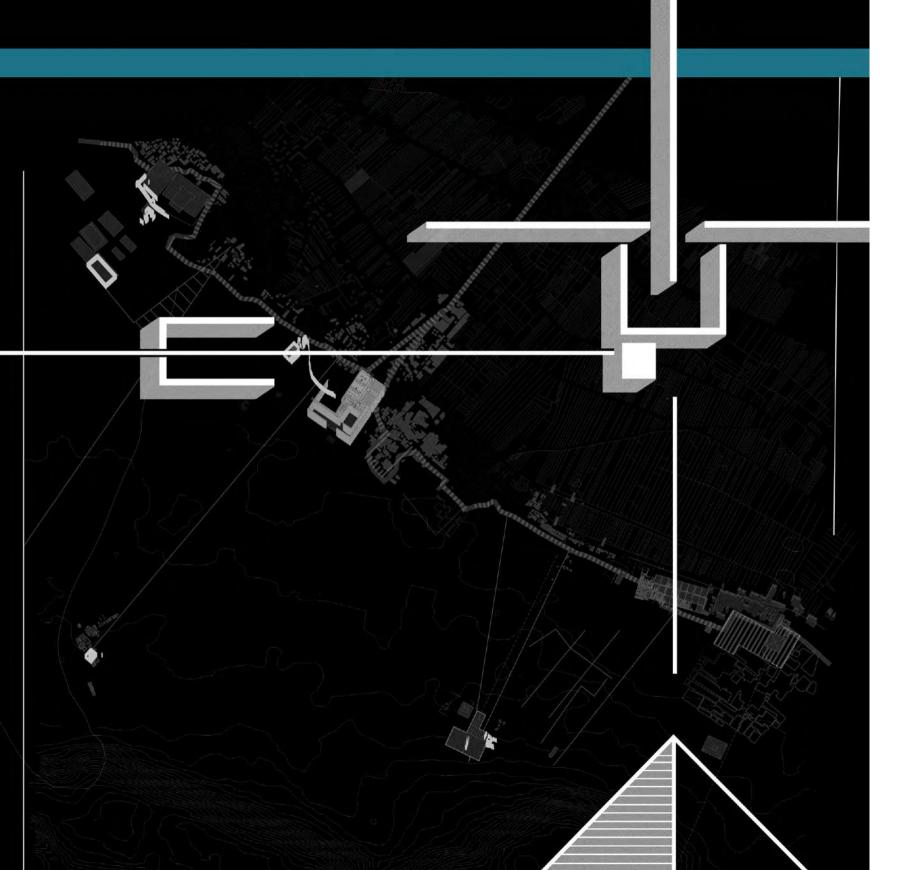
Most of Upper Egypt became unified under rulers from Abydos during the Naqada III period (3200–3000 BCE), at the expense of rival cities such as Hierakonpolis. The conflicts leading to the supremacy of Abydos may appear on numerous reliefs of the Naqada II period, such as the Gebel el-Arak Knife, or the frieze of Tomb 100 at Hierakonpolis (*IJSSH.org*, 2023).

Considered one of the most important archaeological sites in Egypt, the sacred city of Abydos was the site of many ancient temples, including Umm el-Qa'ab, a royal necropolis where early pharaohs were entombed. These tombs began to be seen as extremely significant burials and in later times it became desirable to be buried in the area, leading to the growth of the town's importance as a cult site.

Today, Abydos is notable for the memorial temple of Seti I, which contains an inscription from the Nineteenth Dynasty known to the modern world as the Abydos King List. This is a chronological list showing cartouches of most dynastic pharaohs of Egypt from Menes until Seti I's father, Ramesses I. It is also notable for the Abydos graffiti, ancient Phoenician and Aramaic graffiti found on the walls of the Temple of Seti I.

Hence, the philosophy of the transformation will bring back the sacredness of this place and its power as a ruling city. The objective of this project is to re-imagine the area of Abydos, by generating a Touristic Promenade in order to connect not only the fragmented Temples that lie on the desert side but also to understand the connection between the urban village and these strong monuments. The promenade will act as an active spine for this area on several dimensions such as social, economic and urban development, which will boost the eternal link between the urban fabrics and the monuments.





# Abydos, Act of Palimpsest

Grenoble School of Architecture, France + Ain Shams University, Cairo

Philippe Liveneau, Noha Gamal

with Aly Gabaly, Ahmed Ramadan, Dalia Magdy, Mohamed Mubarak, Nada ELBeik, Nada Mokhtar, Nourhan Mohamed, Zena Zahran

The project takes the line as a spatial unit to help reading the urban palimpsest of Abydos Site. By *reintegrating the former axis* generated from historical evolution maps. These lines will regain force and will continue to penetrate the existing urban fabric. Connected by a new layered Green Line, eight spaces have been defined for development as open museums reflecting the sites artifacts, However, only one stands out as a focal point: the temple of Seti I, which serves as the our main entrance for the site and the point in which the Nile is symbolically reintegrated with Abydos. Water Lines pointing at the temple of Seti I, with the sound of water recalling the Nile and touching the hearts.

#### Elroda Nilometer – Cairo

NILOMETER was a structure for measuring the Nile River's clarity and water level during the annual flood season.

There were three main types of nilometers, calibrated in Egyptian cubits: a vertical column, a corridor stairway of steps leading down to the Nile, or a deep well with culvert. If the water level was low, the fertility of the floodplain would suffer. If it was too high, the flooding would be destructive. There was a specific mark that indicates how high the flood could be and if the fields were to get good soil. Nilometers originated in Pharaonic times, were also built in Roman times.

The Nilometers on Elroda Island dates to 861, when it was built where an older Nilometer had been, based on a design by Afraganus, a famous astronomer.

The massive measuring stick had markings on it to indicate where the water level was at any given time, information the priests would use to determine what conditions the future held: drought, which would mean famine; desirable, which would mean just enough overflow to leave good soil for farming; or flood, which could be catastrophic.

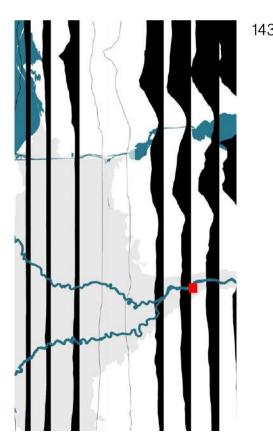
Only rulers, whether Pharaohs or later, Roman, or Arab leaders, were allowed to monitor the Nilometers, and their ability to predict the behavior of the Nile was used to impress the common people. (And to determine how much money would be collected in taxes.) This is why so many nilometers were built in temples, where only priests would be able to access the mysterious instrument.

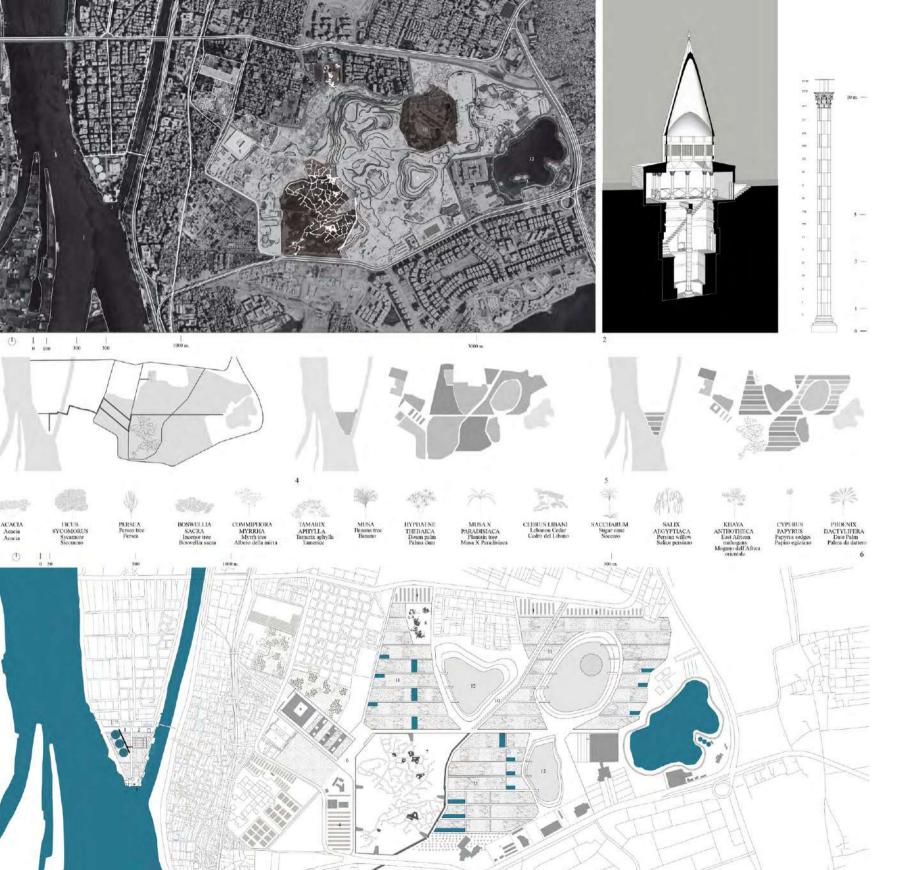
The Nilometer is today housed in a modern building, become a symbolic architecture. The interior is ornately carved, and three tunnels that once let water into the stilling well at different levels have been filled in, so visitors can walk all the way down.

The project site could extend from the waters of the Nile to the land of El Fustat, where the river once occupied a large lake and there was the first capital of Egypt under the Islamic Caliphate.

The proposal could reflect on the archaeological elements, the intense building density of the Cairo and the desert nature of Egyptian landscape, connecting both the Nilometer building to the area within the ground on the other side.

The area could be reused as a station for river tourism, from which the tourist will depart to the large park in the project area.





# Gardens of Nile and Archaeological/Ecological Park

Valladolid University + Sevilla University, Spain Darío Álvarez Álvarez,
Antonio Tejedor Cabrera,
Miguel Ángel de la Iglesia Santamaría,
Mercedes Linares Gómez del Pulgar,
Sagrario Fernández Raga, Nieves Fernández
Villalobos, Laura Lázaro San José, Ana
Muñoz, López, Lara Redondo González,
Carlos Rodríguez Fernández, Flavia Zelli

with Emma González Biro, Cristina González Ordóñez, Florence Lalande

The AR\_17 takes up two areas of high landscape, heritage, archaeological and cultural value: the south area of the Roda Island with the Nilometer, where it is proposed a memory-cultural landscape, and the great inner area with the remains of the ancient city Fustat, Egypt's primitive muslim capital, founded in 641 AD (egymonuments.gov.eg, 2023). The project strategy is based on the development of the Nilometer's area with an approach to link it with Fustat park in order to establish a new stripe of development for regenerating not only the urban, social and touristic approaches but also Cairo's urban nature. In Fustat area, this system organizes a large Archaeological/Ecological Park in which the remnants of the past dialogue with the natural elements: vegetation, water and land. The system evokes the Nile's border cultivation systems, and within, another set of large islands, resembling those of the Nile as it passes through Cairo, one of these islands containing the excavated and visible remains of the city of Fustat. Thus, the oases in the middle of the desert are evoked, in order to create a new landscape model, thanks to the dialogue between architecture and natural elements.

## Qaitbay Citadel – Rosetta

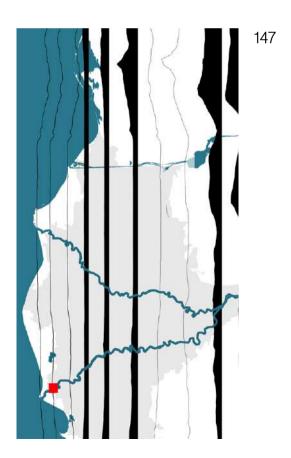
QAITBAY CITADEL was built by Sultan El-Ashraf Seif El-Din Qaitbay (1468-1496 AD) as a part of the northern strongholds built by the Mamluks protecting the country against invaders, and later renovated during the reign of Sultan Qansuh Al-Ghuri (1501-1516 AD). It was built in a very crucial location in Rosetta city, overlooking the Nile bank, a few kilometers before it joins the Mediterranean Sea.

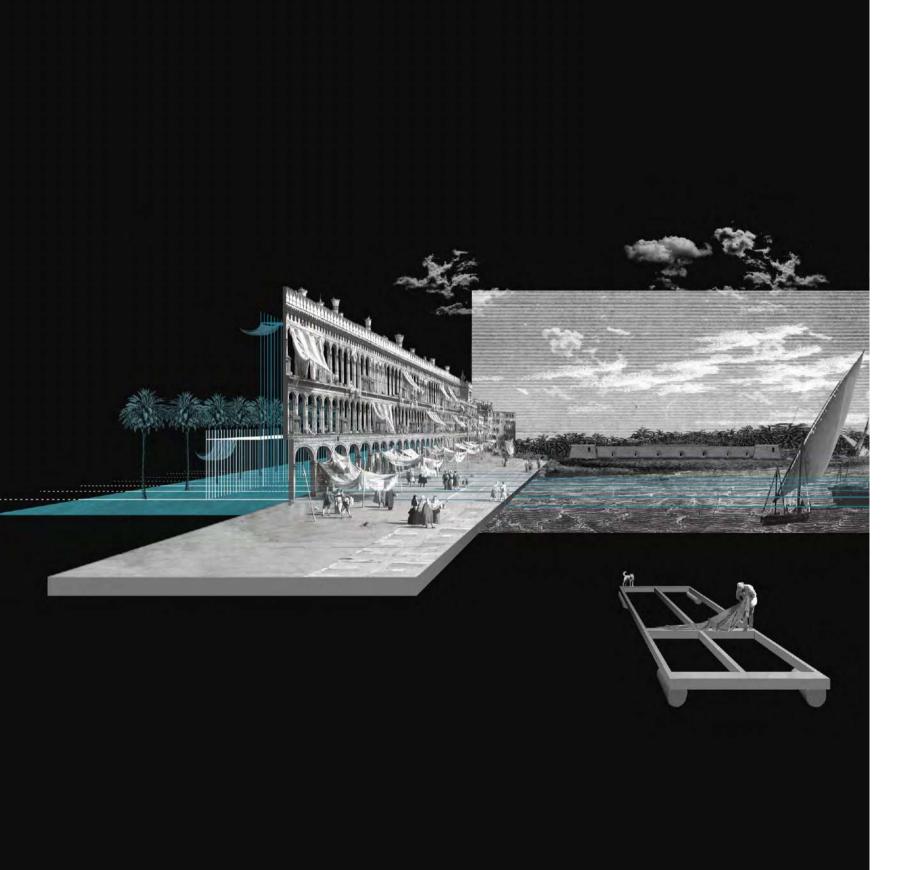
In 1798, Napoleon led an expedition to Egypt, and a year later, the French soldiers occupied the citadel, renovated parts of it and added sectors to house new military equipment, giving it the name "Fort Julien".

During this process, Pierre-François Bouchard, one of the French officers, found the Rosetta Stone, which, considered as one of the most important Egyptological finds, led the Egyptologist Jean-François Champollion to the decipherment of the ancient Egyptian language.

The citadel is one of Egypt's hidden archeological gems of great heritage and symbol of the rich historical assets that Nile River incorporates. It is one of the many sites in Egypt that are believed to be overlooked and need attention for its revival as a substantial heritage and tourist site. Hence, the project should rethink the whole context of the citadel, as strategic marina to maximize and boost water tourism through enabling from coastal direct access to the citadel.

This also entails renovating the surrounding to enhance the touristic experience which could happen through establishing a promenade that encompasses commercial and touristic activities. This project could be part of a bigger plan to enhance the coastal approach to all the historical sites overlooking the Nile River through developing proper infrastructure and amenities needed.





# Floating Institution

University of Palermo, Italy

Zeila Tesoriere, Renzo Lecardane

with Bianca Andaloro, Marco Cannata, Pietro Torregrossa, Martina Scozzari

The Nile front is the pivotal feature of the project, which turns the involuntary geometry of the self-built cages for fish farming into a settlement principle for walking on the river, from where to unveil the citadel.

A geometric grid is matrix for a new surface, laying on both land and river, traversed by a slender building, open and transparent (which consists of the marina, the market for hawkers and a garden café). Orthogonal to the shore, it allows for a sight of the water plaza from the land plaza and vice versa. The square on land is a paved plane planted with palm trees, surrounded in turn by spontaneous palm trees that restore those described in drawings and historical photographs. The river plaza is its double, a body of water navigable and walkable, shaded by a fabric sail held by poles and tie-rods, which breaks off to reveal the fort.

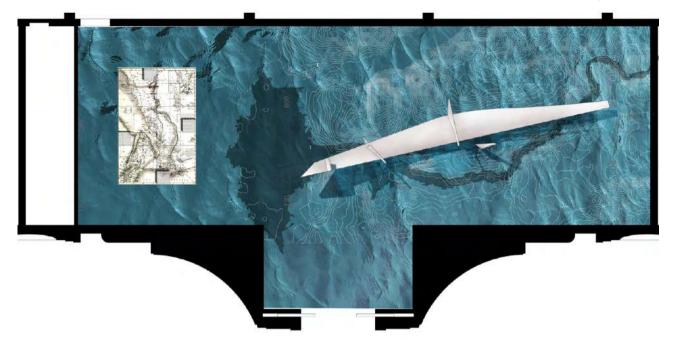
The square is the crucial issue, understood as a space of civic and political construction indispensable for communities to think of themselves as resilient and active subjects: a floating institution.



# The Pavilion

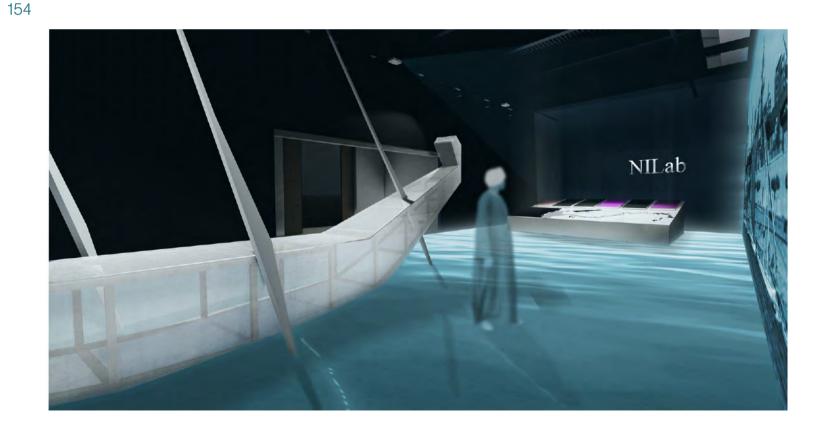


The SOLAR BOAT sailed the blue waters of the Nile, the beating heart of Egypt, since 2500 B.C. up until today. Becoming a symbol for the Egypt Pavilion, the boat is an immortal expression for the Nile life.



The Pavilion is conceived as a multifunctional space, a device for the knowledge and development of ideas and projects along the Nile. It represents an immersive experience in terms of both knowledge and projects. The visitor crosses the external threshold to enter a space-time dimension in which he not only plays as a spectator, as much as completely immerses in the landscape of the Nile as a structuring part alongside the water, nature and history. An almost 'sacred' room and a 'visual machine' characterized by the movement of images and the surreal presence of evocative objects:

- 1 Solar Boat
- 2 Table
- 3 Video Contemporary Grand Tour on Nile





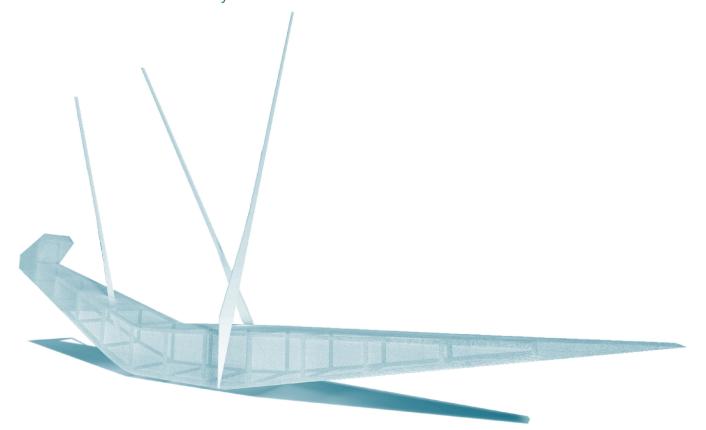
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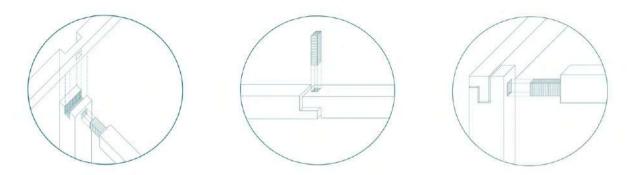
### Solar Boat

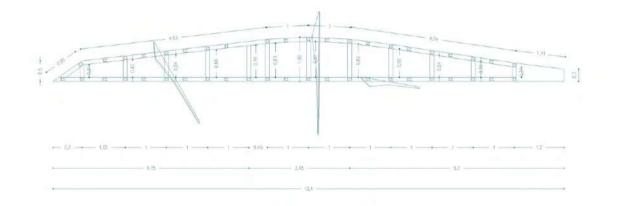
A 12-meter long model recalls the memory of the historical *Solar Boat* (2500 BC) kept in the Grand Egyptian Museum, discovered in 1954. Positioned in the center of the pavilion, it is no longer a funerary relic in the Pharaoh's tomb, but a metaphor and a tool to facilitate a real journey for the visitor immersed in the story of the Nile and its landscapes. The wooden model represents an explicit homage to the theme of water-myth-archeology. A number of 3 wooden oars interact vertically with the horizontality of the boat.

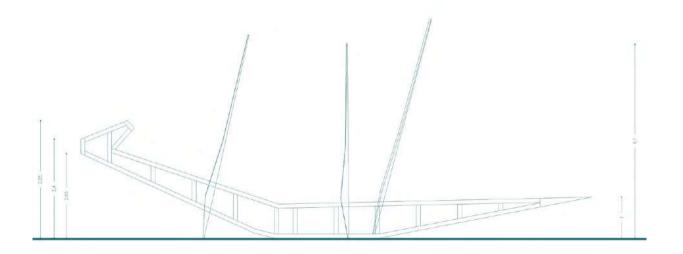
The white envelope of the boat complex will rest on the fluid ground characterized by a projection recalling the flow of Nile water, on which the visitor may will be made to walk.











NILAB Nile as Laboratory

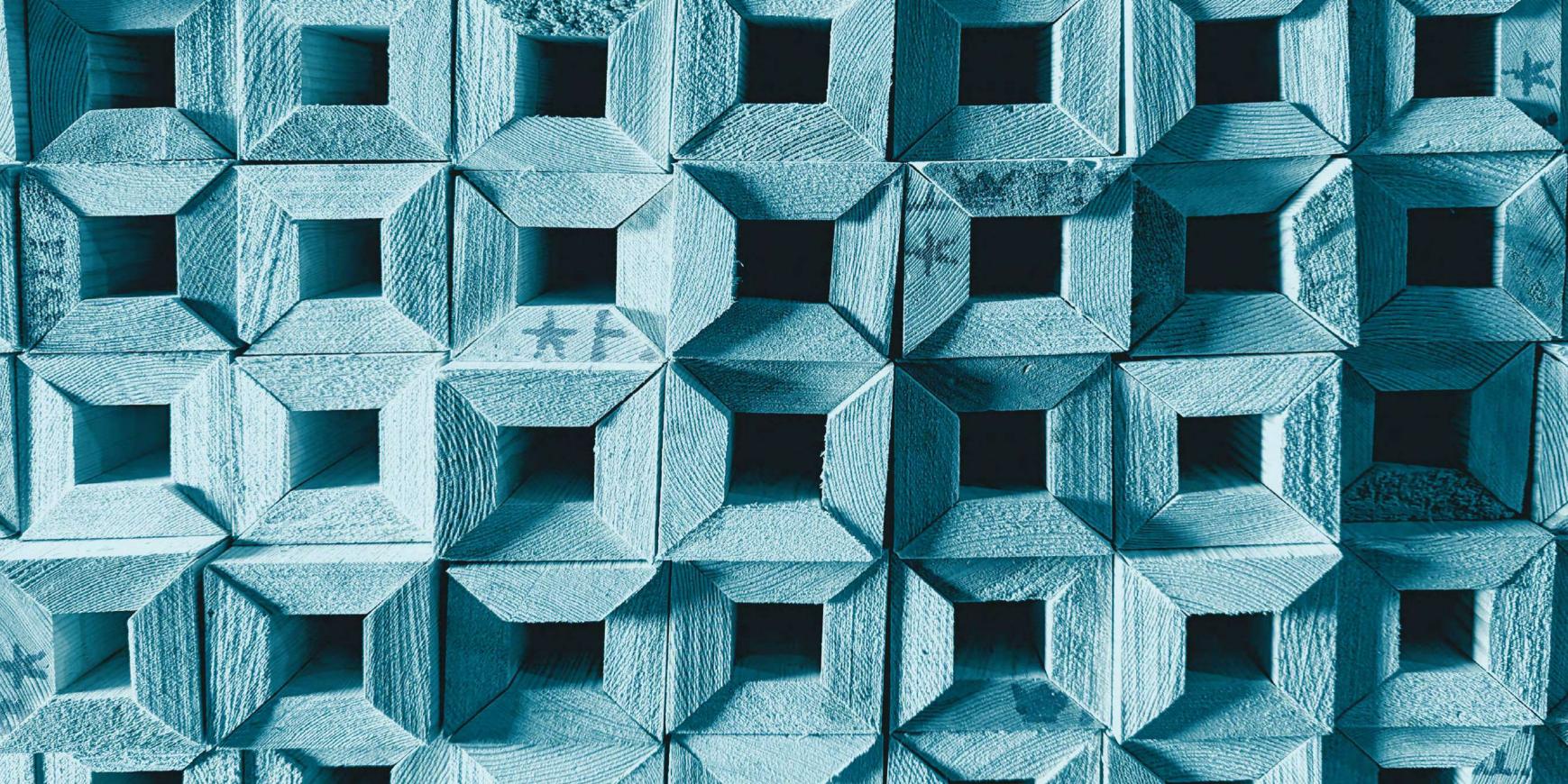




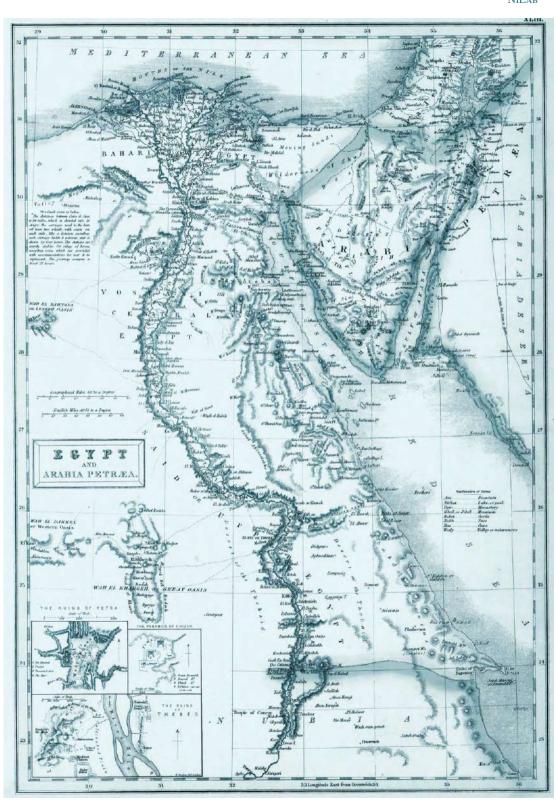








NiLab Nile as Laboratory

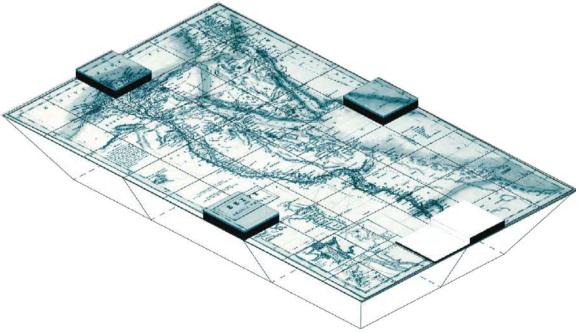


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### Table

The "table" is a crucial element of the project proposals. It represents the device for in-depth analysis and presentation of the design work along the Nile. The horizontal metal surface (4.5m x 3m) is divided into a mosaic of square grids (50x50cm) on which a historical map of the Nile through Egypt is printed. On the table, there are some "books", that present the proposals for the 18 project sites developed by the participating universities. The books present the 18 areas along the Nile river and the respective projects developed by the invited university teams.

The Pavilion



Egypt and Arabia Petrea Hand colored map by Adam and Charles Black in 1851 for "Black's General Atlas". © Copyright 2018 Art Source International

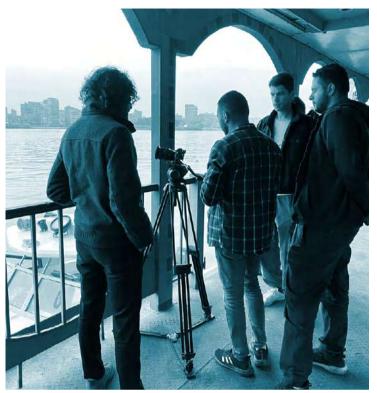
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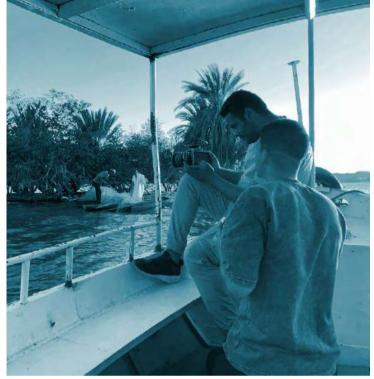
## Video – Contemporary Grand Tour on Nile

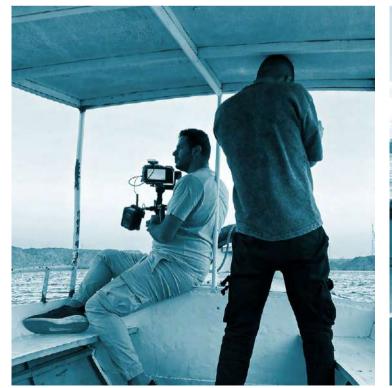
The main wall of the pavilion is adorned by the continuous and changing image projections of the Nile landscapes, as a *Contemporary Grand Tour* starting from High Dam Aswan and reaching the Delta, close to the Mediterranean Sea. This is displayed through a narrative sequence of the different natural and anthropogenic landscapes. Connected with the fluid floor, the projection wall creates an external space, thus provoking bewilderment in the visitor plugged into finding himself in a new space-time condition.

NILAB Nile as Laboratory

The Pavilion











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### Credits

NiLab. Nile as Laboratory

### Commissioners

Ministry of Culture Arab Republic of Egypt National Organization for Urban Harmony Egyptian Academy in Rome

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Ahmed Sami Abd Elrahman, Marina Tornatora, Ottavio Amaro, Moataz Samir, Ghada Farouk Hassan

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Aly ElGabaly (Production/Art Direction)
Fady Iskandar (D.O.P)
Mark Baher (Colour Grading)
Yasmina Safwat (Drone Footage Material)
Osama Elhagan (Production)

Catalog Design
MAY Communication & Events

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Professor and Practitioner

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Ahmed is a founding partner of Design & Build Studio (DBS) in Cairo, he has experience in sustainable development with particular emphasis on large scale residential projects, waterfront development, local development, coastal planning, and public participation. He was a great experience in in Egypt, Africa, and Gulf area, in addition to his practical experience through his work with international entities such as World Bank, UNDP and UN-HABITAT.

He is a member of the editorial technical office of ASEJ: Ain Shams Engineering Journal – Elsevier. He is the author and coeditor of three books and book chapters. He also has many research papers published in the international peer-reviewed press.

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Marina Tornatora

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Architect, associate professor in Architectural Design at the Department of Architecture and Territory – dArTe - within the *Mediterranea* University of Reggio Calabria. She is a member of the Doctorate Board and responsible for international relations. She coordinates the Double Degree Program with the Ain Shams University from Cairo, and she became Visiting Professor at the London Metropolitan University (2019). The focus of her theoretical, design and teaching activities is the relationships between city, landscape and architecture, that are evident in her numerous publications, curated exhibitions, as well as the interventions in workshops and conferences developed also within the Research Laboratory Landscape\_ inProgress (LL\_inP) founded together with Ottavio Amaro in 2014. Some of her recent publications: DESTRATIFICATION '29 '65 'sk14 '2020, 16th Biennale di Venezia 2018: 99FILES, Brutalism Skopje 2019; H2O\_Scapes. Agro Urbe Nature; Learning from Pavilion.

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He has several experiences in teaching with various universities such as Mediterranea University, Politecnico di Milano, German University in Cairo and GUC Berlin campus. He is a professor of design studio, for the Double Degree program, at Ain Shams University in Cairo and professor of design at Coventry University in Cairo.

Beside, his professional experience has been characterized by collaboration with national and international architecture studios, in which it allowed him to work on various scales [Macro, Miso, Micro]. His approach is focusing on the regeneration of the Mediterranean Cities through an alternative socio-spatial scenario that outline a paradigm of urban decomposition and re-composition of the contemporary cities where memory, space and time are the tools for interpretation and intervention.

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