HASSAN AHMED, KEVIN AMENDT, MARGHERITA AUTORINO, ANNALISA AZZOLA, BEATRICE AZZOLA, GINO BALDI, MATTIA BALDINI, NADIA BERTOLINO, FEDERICO BROGGINI, THOMAS CABAI, CHIARA CARAVELLO, GIULIA CAZZANIGA. AMINA CHOUAIRI, FELICE CIMATTI, PIETRO CONSOLANDI, CASSANDRA COZZA, SASKIA DE WIT, DAMIANO DI MELE, SARA FAVARGIOTTI, MARCO FERRARI, ANDREA FOPPIANI, HERMANO LUZ RODRIGUES, INA MACAIONE, VALERIO MASSARO, DAVIDE MONTANARI, LAURA MUCCIOLO, SILVIA MUNDULA, VALENTINA NOCE, RITA OCCHIUTO, ANDREA OLDANI, IRENE PANCRAZI, MARIANA PEREIRA GUIMARÃES, MICHELANGELO PIVETTA, MICHELE PORCELLUZZI, CHIARA PRADEL, SARA PROTASONI, ALESSANDRO RAFFA, GIACOMO RAZZOLINI, ALESSANDRO ROCCA, KEVIN SANTUS, SARA ANNA SAPONE, GERARDO SEMPREBON, GIULIA SETTI, CHIARA TOSCANI, JO VAN DEN BERGHE, FRANCESCA ZANOTTO

TERRARIUM. EARTH DESIGN: ECOLOGY, ARCHITECTURE AND LANDSCAPE

TERRARIUM. EARTH DESIGN: ECOLOGY, ARCHITECTURE AND LANDSCAPE

SILVIA MUNDULA, ACURADI KEVIN SANTUS, SARA ANNA SAPONT

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Mimesis

TERRARIUM. EARTH DESIGN: ECOLOGY. ARCHITECTURE AND LANDSCAPE

Silvia Mundula, Kevin Santus, Sara Anna Sapone

Terrarium collects research and reflections on the relationship between space, soil, vegetation and the biotic community, linked through the metaphor tion), Università luav di Venezia, Università of the terrarium. The book is curated by a research group from the Ph.D. program "Architectural Urban Interior Design". coordinated by Alessandro Rocca (Department of Architecture and Urban Studies at Politecnico di Milano), involved in the PRIN Sylva by the IUAV research unit.

PUBLISHER Mimesis Edizioni Piazza Don Enrico Mapelli. 75 20099 Sesto San Giovanni Milano - Italy www.mimesisedizioni.it

FIRST FDITION September 2024

ISBN 9791222311593

10.7413/1234-1234032

PRINTING Printed in September 2024 by Digital Team - Fano (PU)

FONTS Union, Radim Peško, 2006 JJannon, François Rappo, 2019

GRAPHIC LAYOUT bruno. Venezia

MAKING-UP Silvia Mundula, Kevin Santus, Sara Anna Sapone

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This volume was realised with Funds Mur-Prin 2017 (D.D. 3728/2017). The book is also available in open access at www.iuav.it/prin-sylva-prodotti.

Each volume in the series is reviewed by referees chosen from members of the Scientific Committee

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COLLANA SYLVA

Project of the Research Unit of Università luav di Venezia within the PRIN «SYLVA. Rethink the sylvan. Towards a new alliance between biology and artificiality, nature and society, wilderness and humanity». Call 2017. SH2. Research Units: Università degli Studi di Roma Tre (coordinadegli Studi di Genova, Università degli Studi di

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GREEN-COVERED: THE SINT-PIETERSBERG AS A TERRARIUM OF CULTURES

KEVIN AMENDT, CHIARA CARAVELLO, RITA OCCHIUTO

OS GREEN-COVERED

The Sint-Pietersberg* is a hill stretching in continuity between Belgium and the Netherlands and is here adopted as an experimental *terrarium*. In the center of a perennial conflict of interests between nature conservation and industrial exploitation for the extraction of limestone blocks and powder, the recent history\$\hat\$ of the Sint-Pietersberg is an intense succession of actions and reactions between humans and nature. Here, after gradual withdrawal of limestone quarrying operations, a process of re-naturalization began, either from nature itself or through the artificialization of greenery. Progressively, exceptional natural beauty and biodiversity regained their place both in the surface and underground spaces, forming a unique lush landscape (Occhiuto 2021).

The text aims to compare different ways for nature to regain its place in man-made landscapes resulting from invasive underground resource exploitation. The focus is on the interactions in re-naturalization processes between phenomena of 'spontaneous nature,' freely formed and limitedly controlled, and phenomena of 'induced nature,' imposed and highly controlled. Focusing on aesthetic and cultural values, the text questions the significance of re-naturalization actions: is it enough to compose 'green landscapes' as desirable objects to be exploited to make the Earth more profitable? Or can considering 'natural systemic conditions' suggest other ways of intervening and caring for places, taking inspiration from what nature is already rebuilding and reconfiguring? \downarrow

THE VERLOREN VALLEI AND THE ENCI-QUARRY IN THE SINT-PIETERSBERG

The limestone extraction processes can take place underground or on the surface, altering the landscape irreversibly albeit leading to different environmental and aesthetical impacts. In both cases presented in this text, open-cut quarrying began in the interbellum (SAHV 1985; Amendt 2010), during which the original above-ground landscape is literally removed and underground galleries from previous extraction phases disappear. \mathbb{A}

The first case is the *Verloren Vallei* L, which can be defined as a small-scale open-cut quarry L where the extraction processes came to an end within a few years (SAHV 1985, p. 63). The re-naturalization process has been taking place since the industrial use was ceased about eighty-five years ago, defining a spontaneous natural environment. The second case is the ENCI-quarry, which unmistakably manifests its 'operational landscape character' (Rosier 2022, p. 18) with the violent impact of its size, * given by extraction operations protracted over almost a century.

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Although the extractive process has only recently stopped, I it was already from around 1939 (Nieste 1996, p. 125) that the redevelopment of the surrounding affected by quarring began, according to man-imposed and highly controlled natural development.

The processes of the quarry's re-appropriation by nature brought to life precious landscapes, thicker and lusher throughout the seasons, and visibly enriched from year to year. The presence of different species of flora and fauna, each with its own specific sound, rhythm, and frequency, lends an intense and unique flavor to every step in these landscapes. The character and materiality of the soil, the lightness and porosity of the vegetal mantle, the play of light and shadow, filters and determines the development of the space all around. In this impactful overall picture, only the attentive observer can grasp the complex combination of particular units characterizing the post-extractive landscape. Indeed, if in the case of the ENCI-quarry the re-naturalization processes are apparently spontaneous, on a closer look the landscape is to a large extent the result of management operations that have forced nature into overbearing development guides.

If, on the one hand, spontaneous re-naturalization is dominated by a continuum of ongoing evolutionary processes (Fromonot & Desvigne 2020), on the other hand, greening is subject to man-driven functional and aesthetic artifice (Lassus 1981), where man-desired natural values are imposed and "nature cannot remain itself" (Morton 2007, p. 81). In this regard, a distinction shall be made between 'system' and 'standard' possibilities for cultivating these soil and subsoil samples, setting the ground at the center of man-nature relationship (EC 2000).

POST-EXTRACTIVE LANDSCAPES

In 1938, in his extensive book on the Sint-Pietersberg, van Schaïk talks about several entrances of underground quarries \downarrow in the midst of the forest, still visible "despite [open-cut] limestone exploitation has been eating through the most beautiful part of the forest for a few years" \dagger . The text refers to the Verloren Vallei, where the open-cut exploitation revealed to the surface the full height and depth of the underground galleries, creating "a particularly beautiful effect amid the green frame" (van Schaïk 1983, p. 102) \dagger . This area with exposed underground passages \dagger is characterized by a specific kind of landscape defined in French as erablaies-tillaies à scolopendre, \dagger outlined by van Schaïk as "a particularly beautiful piece of (cultural) landscape" (van Schaïk 1983, p. 412) \dagger \dagger .





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In this regard, cultural value is often attributed to the new vegetation covering the land, also referring to the land remodeled by English landscape gardeners in the 17th century (Repton 1800). Here, the cultural values are the experiences that people can still gain by walking through the site, without doing anything more: just to connect with the different states of the land, which is always changing.

While in the *Verloren Vallei* we can observe nature reclaiming its space wildly, partly precluding access to man, the decommissioning of the ENCI-quarry is accompanied by a man-driven transformation process, where exploitation of the territory has been 'green-covered.'

Indeed, if in the ENCI quarry, a vegetal colonization phenomenon known as 'primary succession' \$\frac{1}{2}\$ can be observed, \$\frac{1}{2}\$ twe know that the results of this process are not entirely natural. In fact, the transformation of the slope into a chalk grassland was encouraged by its covering with limestone and an overlay of loss. Furthermore, "grass clippings from other chalk grasslands were laid out shortly after placement" (Majoor et al. 2020, p. 320). \$\frac{1}{2}\$ In addition to this, given the artificial ground level where a part of the area, a permanent mechanical water pumping system must be operated (Majoor et al. 2020, p. 321) \$\frac{1}{2}\$ I. Thus, the development process of this natural environment is entirely driven by man.

In this sense, the *Plan of transformatie* $\ ^{1}\!\!\!\!/\ _{1}$ written in 2009 $\ ^{1}\!\!\!\!/\ _{2}$ by the *Stichting Ontwikkelingsmaatschappij ENCI*, can be seen as the design concept for the composition of a *terrarium* defined within the former quarry area.

CONCLUSION

For both the underground and the surface landscape generated by centuries-old limestone quarrying in the Sint-Pietersberg, we may conclude that "a cultural product with a peculiar, almost perfect, aesthetic balance has been created unconsciously, unintentionally answering to the same laws that exist in nature." (Diederen 1982, p. 7) \Re *.

This observation strongly connects our brief study to the principles of the European Landscape Convention (EC 2000), which calls for attention to the perception that is set between people and places. Hence, new relationships can slowly emerge from the care given to perception (not sight, not function). For this reason, the vegetation cover cannot be reduced to a technical layer cladding the surfaces exposed by previous operations. And it is not to be considered as a strategy of embellishment

GREEN-COVERED

either, taking care of the visual aspect of the place, nor their economic values.

The *terrarium* thus acquires the meaning of giving time to accompany natural phenomena in their development, but also allowing the population to re-tame the places to give them a cultural meaning, a sense of belonging associated with manmade landscapes' evolution in time.

"Pyramids" in the ENCI-quarry.

The decommissioning of the ENCI-quarry is accompanied by a man-driven transformation process, where a specific and symbolic landscape is predefined. Photo by Chiara Caravello, 2023.



GREEN-COVERED

'Sint-Pietersberg' in Dutch or 'Montagne Saint-Pierre' in French.

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Exploitation of the Sint-Pietersberg for the underground extraction of limestone began from the 13th century until the beginning of the 20th century, when open-cut quarries took hold and continued to the present day. Cfr. K. Amendt, De afgaving van de Sint Pietersberg en een ingangspartij zuidelijk van Lichtenberg, in "SOK Mededelingen", 53, July 2010, pp. 22–47; J. Silvertant, Caestert: een mijnbouwarcheologische erfgoedsite, Scientific report of the Institute Europa Subterranea 3, Institute Europa Subterranea, Valkenburg aan de Geul 2010; D.C. van Schalk, DE SINT PIETERSBERG. Met een aanvullend gedeelte van 1938-1983, EF & EF b.v., Thorn 1983.

The Sint-Pietersberg is an area that lends itself to experimentation with different approaches, from conservative (respecting long-term natural processes) to interventionist (altering the natural rhythm to reach short-term goals). Facing these two positions, a living *terrarium* emerges as an experimenting field for land-scape research, based on iterative in-situ actions.

M While the shape of the underground galleries is directly determined by the mining technique employed and it remains stable over time due to the constant environmental conditions in the underground (excluding exceptional phenomena such as collapse or flooding of portions of the galleries), the spatial configuration of the landscape on the surface is determined both by the drastic marks left by open-cut extraction and by variable environmental conditions. In addition, the increased visibility of these landscapes draws higher public attention and a consequent greater need for redevelopment to 'heal the opencut wound' and 'return Earth to the people'.

The Dutch name 'Verloren Vallei' can literally be translated in English as 'Lost Valley'.

Approx. 200 x 40 meter. Data according to measurements taken by the author on the Geoportal of Vlaanderen I- Digitaal Hoogtemodel Vlaanderen II, multidirectionale hillshade 0,25 m. Available online at: https://www.geopunt.be/[accessed 7 August 2023].

Approx. 1800 x 1300 meter. Data according to measurements taken by the author on the Geoportal of Vlaanderen - Digitaal Hoogtemodel Vlaanderen II, multidirectionale hillshade 0,25 m. Available online at: https://www.geopunt.be/[accessed 7 August 2023].

The open-cut extraction stopped in 2018 (Majoor et al. 2020, p. 303).

Van Schaïk mentions in particular the entrance of Caestert, one of the most ancient underground quarries in the area along the border between Belgium and the Netherlands.

Author's translation.

Author's translation

Among others, the largest and most majestic entrances to be seen today in the Verloren Vallei are known in French as *les grandes fenêtres* (literally: the big windows), probably because of both the fact that originally they were not entrances and due to their position halfway up the limestone outcrop.

We would like to thank Raphaël Magermans of the *Département de la Nature et des Forêts - Service public de Wallonie* for the information. Cfr. *GLA4Ia - Erablaies-tillaies à scolopendre*, Portail Wallonie. http://biodiversite.wallonie.be/fr/gl-a4Ia-erablaies-tillaies-a-scolopendre.html?IDC=951 [accessed 7 August 2023].

Author's translation.

According to the *Encyclopaedia Britan-nica*, primary succession is "the evolution of a biological community's ecological structure) in which plants and animals first colonize a barren, lifeless habitat. Species that arrive first in the newly created environment are called pioneer species, and through their interactions they build a simple initial biological community." Cfr. "Primary Succession | Definition, Stages, & Facts | Britannica." https://www.britannica.com/science/primary-succession [accessed 19 July 2023].

This is a rare process that can only exist where fertile soil is lacking on the surface, for example due to a volcanic eruption or after the retreat of a glacier (Majoor et al. 2020, p. 306). Author's translation.

Author's translation.

Author's translation.

Document without author reference available online at: https://www.enci.nl/nl/plan-van-transformatie [accessed 7 August 2023].

Note that the plan was defined nine years before the final closure of the ENCI opencut quarry in 2018.

Author's translation.

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BIOGRAPHIES

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mentalist and coral scientist. In 2007, he foundthen, he is fighting for an ecologically sustainable development of the country, involving local different islands and organised the very first coral relocation in the Maldives (2016). He believes that only through information and knowledge the community will be able to protect and preserve its natural heritage. His aim is to grow back entire reefs and restore their ecological role lost due to climate change and coastal development.

KEVIN AMENDT

Kevin Amendt is an independent researcher engaged in the study of underground guarries, their role in today's landscape and their preservation. Member of the "Studiegroep Onderaardse Kalksteengroeven". "vzw Hulpdienst Groeven" and founder of "Onderzoeksbureau MGL". he advises public and other organisations in the border re- compositional practice. aion Lièae (BE) - Limbura (NL/BE).

MARGHERITA AUTORINO

tient creative, third of four children. After classical high school, she enriched her university course with two years abroad, practicing drawing at FAUP in Porto and ecology at ENSP in the Master's Degree in Architectural Design at Versailles-Marseille, and on-site internships with Wagon-Landscaping and the Botanical Garden Senior Lecturer in Architectural Theory and Deof Rome. In 2023, she graduated with honors in partment Head of Equality, Diversity and Inclu-Architecture - Urban Design at Roma Tre, guided sion at Northumbria University, Newcastle. by A. Metta, presenting with C. Condemi Maglia Boscata, a landscape architecture thesis on the material and immaterial, microscopic and cos- Federico Broggini is architect graduated at Acmic geographies of the Magliana Stream.

ANNALISA AZZOLA

Annalisa Azzola is a marine ecologist and research fellow at University of Genoa. She fin-tude Platform for Urban Design and Research. In ished her PhD in Marine Science and Tech- 2022 he started a PhD in landscape architecture nologies in 2023. Her research topics include at RomaTre University. The thesis explores the characterization, monitoring, and assessment of the ecological status and change over time asphalt, investigating their intrinsic values and of coastal ecosystems. Part of her research potentialities in landscape design practices. also focuses on assessing local and global anthropogenic impacts. Her studies are based on scientific diving techniques, including visual field Thomas Cabai is an Italian architect and Ph.D. surveys and photographic sampling.

BEATRICE AZZOLA

Beatrice Azzola is an architect and academic researcher. She worked in several architecture firms in Italy, Portugal and Switzerland, In 2021 she started her PhD on Italian highway architecture and landscape. She also works on the odiversity Future Center and is currently working disciplinary interferences between architecture on several projects of Restoration Ecology and and ecology.

GINO BALDI

Hassan (Bevbe) Ahmed is a Maldivian environ- Architect, in 2020 founded in Bergamo with Serena Comi, Vacuum Atelier, an architecture and ed the NGO "Save the Beach Maldives". Since design studio, winner of architecture awards for young architects and architecture competitions. He holds a doctorate in architectural composition communities and schools. In 2014 he started his (PoliMi - AUID) (2019 -), Participates in academic first coral restoration project. He led projects on conferences in Italy and abroad such as CA2RE Milan and Ljubljana (2020-21) and Conceptual Design of Structures in Zurich (2021). Workshop Urban regeneration and Industrial heritage EPFL Lausanne (2023)

MATTIA BALDINI

Mattia Baldini is an architect, founder and member of Fuoriformato Architettura, and PhD researcher in Architecture. Theories and Design (cycle XXXVIII, SSD: ICAR/14) at La Sapienza, University of Rome. He has conducted research in Italy (Florence, Rome) and abroad (ETSA in Seville). The main field of research application concerns the relationship between the theoretical pretexts of design and their applications in

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Nadia Bertolino. PhD. is an architect, writer and educator concerned with ethical design practic-Born in Rome in 1997, curious explorer and pa- es in response to socio-spatial inequalities and environmental emergency. She is Assistant Professor in Architectural and Urban Design at the University of Pavia, Formerly, Nadia coordinated Sheffield School of Architecture and she was

FEDERICO BROGGINI

cademia di Architettura di Mendrisio. Since his early experiences he focused on urban and landscape design, in particular dealing with soil and water management concerns. He is part of Latiworld of urban soils, in particular sealed soils by

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candidate at the Department of Architecture and Urban Studies (DAStU) at Politecnico di Milano, where he is also a teaching assistant in the Landscape and Infrastructure Design Studio, His main research interest lies within the relationship between ecology and built environment in anthropic territories. He is part of the National Bi-Phytoremediation in the Metropolitan City of Milan, Tuscany and Friuli Venezia Giulia.

CHIARA CARAVELLO

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Chiara Caravello is a PhD candidate in architecture in a double programme between the University of Liège (BE) and Politecnico di Milano (IT). out her research on underground quarries in the cross-border area of the 'Three Countries Park' in the Eureaio Meuse-Rhine (BE-NL-DE).

GIUI IA CAZZANIGA

Architect and researcher. Giulia Cazzaniaa holds a PhD in Landscape and Environment from Sapienza Università di Roma. Her research focuses on the impact of representation on the perception of landscape and its influence on the design Damiano Di Mele, architect, PhD candidate at Power focusing on the decommissioning of solar power plants and she is currently a research fellow at the Politecnico di Milano where she teaches Landscape Architecture design.

AMINA CHOUAIRI

Amina Chouairi is a PhD student in Urbanism at Università luav di Venezia and holds a Master of Science in Landscape Architecture from Delft University of Technology. Since 2019, she has been researching and working on the Venetian Lagoon complex transitional territory, exploring the debated relations among its cultures and namarshes, i.e. the ignition point from which to rethink the Venice-in-a-lagoon system.

FELICE CIMATTI

Felice Cimatti teaches "Semiotica e teoria dei linguaggi" at the 'Università della Calabria.

PIETRO CONSOLANDI

Pietro Consolandi is a researcher and artist based in Venice, where he co-founded the Barena Bianca collective in 2018. He is a research fellow at THE NEW INSTITUTE Centre for Envi- Marco Ferrari is a researcher at the University ronmental Humanities (NICHE). Ca' Foscari University, inquiring about the possibility to implement the Rights of Nature in the Venetian Lagoon from a cultural point of view. He also collaborates project and partner and co-founder of the artistic with art and ecology foundation TBA21-Academy since 2020, where he develops various collaborative didactic initiatives as OCEAN / UNI Research Lead

CASSANDRA COZZA

Cassandra Cozza, architect, PhD, is Lecturer and Assistant Professor in Architectural and Urban Design at the Department of Architecture Andrea Foppiani is a PhD candidate in Architecand Urban Studies. Politecnico di Milano. Her research topics focus on contemporary paradigms of architectural and urban design studying changes with a design approach aimed at enhancing both spatial relationships and contexts. She is a member of the scientific editorial board of the magazines Territorio (Franco Angeli) and Ardeth (Rosenberg & Sellier).

SASKIA DE WIT

Saskia de Wit is landscape architect and assistant professor at the Section of Landscape Architecture, Delft University of Technology. She Awarded with a FNRS fellowship, she is carrying designs gardens and landscapes at her office Saskia de Wit tuin en landschap. Her research focuses on the garden as a core concept of the field of landscape architecture: the concept of the garden is used as a lens for further research into site-specificity, the sensory perception of place, urban landscapes, leftover spaces and urban forestry.

DAMIANO DI MELE

of future transformations. Recently, she has applied this reflection to the River Po basin. She is co-tutorship with the Universidad Politécnica de part of the research team financed by Enel Green Madrid (UPM). Graduated cum laude from the luav University of Venice after a period of training in Spain. His current research is focused on the analysis of themes related to the history and criticism of contemporary Spanish architecture in the relationship between figurativeness and structure. He participates in research activities in the GIPC group (Grupo de Investigación en Paisaie Cultural) at the Proyectos Arquitectónicos department of the Escuela Técnica Superior de Arquitectura de Madrid (ETSAM), where he has been a visiting doctoral researcher since 2022.

SARA FAVARGIOTTI

tures. Crucial for her is the understanding of the Sara Favargiotti is Associate Professor at the agency of the barene landscape - the brackish University of Trento, DICAM, Her research investigates the multiple identities of landscapes through applied research at different scales, focusing on fragile territories, emerging infrastructure, adaptive dynamics and regenerative design. Local coordinator of project B4R. Branding for Resilience (PRIN, 2020-2024), member of the Directive Board of IASLA (since 2018), she is co-founder and scientific advisor of the innovative startup RUMA S.r.I. SB.

MARCO FERRARI

of Trento, DICAM and adjunct Professor of Architectural Design Theory at the University of Ferrara. He is project leader of PaesaggiForti duo AIDEL. He is particularly interested in contemporary architectural and landscape theory and in revealing the relationship between bodies. ecologies and space, questioning concepts of domesticity and intimacy in both living environments and landscape.

ANDREA FOPPIANI

tural, Urban, and Interior Design from the DAStU department at Politecnico di Milano, where he graduated with honors in Sustainable Architecture and Landscape Design. His research focuses on post-logistics landscapes in the Po Valley, working through more-than-human ecologies to explore future hybrid scenarios. He is an academic tutor in design studios and is part of the Landscape Offfl Limits International Workshop's organization team.

HERMANO LUZ RODRIGUES

Hermano Luz is a designer from Brazil and a Valentina Noce is an architect and researcher PhD researcher in Creative Technologies at the based in Milan (Italy). She is the founder of ar-University of Galway. He received a Master's in chitectural office Sabotage Practice. She is com-Design Studies degree from the Harvard Gradupleting a PhD in Architecture Interior and Urban ate School of Design, where he was a curator of Design at Politecnico di Milano, where she's also the GSD Kirkland Gallery. He has exhibited and collaborating in teaching activities. Bridging the published internationally as an artist and contrib-realms of architectural practice and academic uted to several technological art projects. In his practice, he mixes iconic cultural heritage with between space and technology. contemporary digital media to inspire participatory creative practices.

INA MACAIONE

Unibas, coordinates the Phenomenology of with the transformations of architecture, city and landscape in the process of ecological transition and Climate Change.

VALERIO MASSARO

Valerio Massaro is an architect and academic AA School (Projective Cities).

eral institutions, including London South Bank Engineering, He earned a Ph.D. in Architectural University, the Royal College of Art and the Uni- and Urban Design from the Department of Arversity of Greenwich.

DAVIDE MONTANARI

Davide Montanari graduated with honors in Sustainable Architecture and Landscape Design from Politecnico di Milano where he is currently doing a PhD in Architectural, Urban, and Interior Design. His research focuses on the practices of Irene Pancrazi is a marine biologist specialising appropriation of water within the Po River Basin to unveil protocols of exploitation and investigate In 2016 she started to work for the NGO "Save future visions through the image of cyborg landscapes. He works as tutor in design studios and ing event in the Maldives and feeing the urge to is member of the Landscape Of[f] Limits Interna- take action. Since then, she was in charge of tional Workshop's organization team.

LAURA MUCCIOLO

tecture. Theories and Design, Sapienza Univer- of the project managers at the NGO and shares sity of Rome. In 2022, she exhibits the ephemeral the same dream as its founder: to grow back the design With Mies van der Rohe into a New World whole reef and see it thrive. (Neue Nationalgalerie) during the Hypercomfort SS by S. Bru (BRUTHER). In the year, she was guest curator with Michelangelo Pivetta and Giacomo Razzolini of the touring exhibition Isolario Venezia Sylva (curated by Sara Marini) at Dept. Paradiso (Libria, 2023).

SILVIA MUNDULA

Silvia Mundula is a PhD candidate at the Poin Milan, she gained a Master's degree in Histo- focused on Human Health and Sustainability. ry and Critical Thinking at the Architectural Association in London, where she developed her interest in the theory of gardens. Her research investigates the cultural principles and the design outcomes of contemporary wild oriented planting design in Europe.

VALENTINA NOCE

research, her work delves into the intersections

RITA OCCHIUTO

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ANDREA OLDANI

and a PhD candidate at the AA School of Archi- Andrea Oldani is an assistant professor of Landtecture. He holds a degree in architecture from scape Architecture at the Department of Archithe University of Florence and an MPhil from the tecture and Urban Studies at Politecnico di Milano, where he is faculty member of the School He taught Design and History and Theory in sev- of Architecture, Planning and Construction chitecture and Planning. His researches on the landscape of contemporary infrastructure, are documented by a consistent number of scientific publications. Oldani curated seminars, exhibitions and editorial works.

IRENE PANCRAZI

in tropical environments and their restoration. the Beach Maldives", after witnessing a bleachthe set-up and the research protocol of various coral restoration projects. She collaborates with various Italian universities, tutoring students and Laura Mucciolo, architect. is Ph.D. st. in Archi-supporting scientific research. Today she is one

MARIANA PERFIRA GUIMARÃES

Mariana Pereira Guimarães is an architect-engineer from Brazil and PhD Candidate in Politécnico di Milano's Architecture. Urban and Interior of Architecture in Florence. She publishes Terzo Design program. Mariana was a Marie-Curie EID-ITN research fellow within the SOLOCLIM programme (ID 861119) studying innovative outdoor water-cooling solutions such as fountains and water mists that can respond to extreme urlitecnico di Milano and a garden designer. After ban heat. She received a Master's in Urban Plancompleting her Master's degree in Architecture ning and Public Health from Harvard University

MICHELANGELO PIVETTA

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versity of Venice, PhD and Associate Professor ber of architecture firm filoferro architetti. He is in Architectural Design in the Department of Ar- teaching tutor at the Department of Architecture chitecture of University of Florence. The field of of the University of Florence. He was a research application of the theoretical research is the pro- fellow at the University of Florence and Pavia for iect and its manifestation through the ephemeral projects dealing with different themes. In 2022. balance between technique, construction and he was quest curator with Michelangelo Pivetform. He writes essays and books addressing in ta and Laura Mucciolo of the touring exhibition parallel the didactic and professional activities Isolario Venezia Sylva (curated by Sara Marini) at as experimental opportunities for perennial and Dept. of Architecture in Florence. necessary verification.

MICHELE PORCELLUZZI

Michele Porcelluzzi is an architect and PhD can- of architecture and the Head, for the period didate in Architectural, Urban and Interior Design 2019-24, of the Ph.D. program of Architectural at DAStU, Politecnico di Milano, in collaboration Urban Interior Design (www.auid.polimi.it) at the with the National Biodiversity Future Center. His Department of Urban Studies of Politecnico di research interest is focused on the concept of collectiveness in architectural and urban design. He is a founding member of the research project Assume There's a Landscape. His research ac-biology and artificiality, nature and society, wiltivity has been published in journals including derness and humanity" and the Ca2re European OASE (2022) and Die Architekt (2023) and exhibited at IABR 2022 in Rotterdam.

CHIARA PRADEI

Chiara Pradel, PhD Arch, (Politecnico di Milano, 2022), is a Landscape Architect and Post-doc researcher at TU Delft, Faculty of Architecture and the Built Environment. Her research explores study the design transition facing climate fragilground movements originated by building activities and its impacts on the morpho-typological ities, mainly focusing on material culture, reuse aspects of the project. and circular baukultur. She lives and works between Milan (Italy) and Delft (Netherlands).

SARA PROTASONI

Sara Protasoni, Head of the M.Sc. in Sustainable Architecture and Landscape Design Politecnico di Milano - Piacenza Campus, is Full Professor of Landscape Architecture and member of the Board of the PhD Program in Landscape Architecture at La Sapienza University in Rome At the Politecnico di Milano she combines teaching Meanwhile, she worked in Milan-based architecwith an intense activity of design and theoretical research on landscape. She is the author of several monographs and over a hundred essays published in books and journals in the field.

ALESSANDRO RAFFA

Alessandro Raffa, architect PhD, is assistant professor PON R&I FSE-REACT EU at DICEM Unibas; member of NatureCityLAB and UNESCO Chair on Mediterranean Cultural Landscapes research groups. PhD at DAStU Politecnico di Milano, research fellow Sven-Ingvar Andersson at Benetton Foundation (2020) and post-doc re- of two Ph.D. titles. SJTU + PoliMi. in 2019, he searcher at DAD Politecnico di Torino (2021). He has been a visiting scholar at the BUCEA. The is currently Fulbright Visiting Scholar at Univer- core topic of his research covers architectural sity of Florida. College of Design, Construction strategies of revitalization in complex settlement and Planning and Florida Institute for Built Environment Resilience

GIACOMO RAZZOLINI

Michelangelo Pivetta, graduated from IUAV Uni- Giacomo Razzolini architect, founder and mem-

ALESSANDRO ROCCA

Alessandro Rocca is an architect, a professor Milano. His recent research develops within the program of national interest (PRIN) "SYLVA - Rethink the sylvan: Towards a new alliance between Consortium for design-driven research.

KEVIN SANTUS

Kevin Santus is an Architect. Research Fellow and Ph D, candidate at the Politecnico di Milano. (Italy) in Architecture, Urban, and Interior Design. He won an interdisciplinary grant (2020-2024) to

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SARA ANNA SAPONE

Sara Anna Sapone is an Architect, Ph.D. candidate and Research Fellow at Politecnico di Milano. Here she was involved in teaching and research activities, such as the program G124 promoted by Renzo Piano on italian peripheries. ture firms, addressing urban renewal and architectural design. Since 2020, she's developing her doctoral research "Precision Wildland" within the AUID program at PoliMi and a research stay at the Landscape architecture section of TU Delft, funded by the Idea League Grant.

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