

THE WEAK MEMORY. THE DESTRUCTION AND RECONSTRUCTION OF THE ARENA FLEGREA IN NAPLES AND ITS PRESENT ISSUES OF CONSERVATION

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Abstract. *The Arena Flegrea is one of the most relevant buildings of the great exhibition complex of the Prima Mostra Triennale delle Terre d'Oltremare (1937-1940) in Fuorigrotta, in the western area of Naples, which is undoubtedly the most significant architectural experience realized in Southern Italy in the first half of the 20th century. The design of the Arena Flegrea was entrusted in 1938 to the young architect Giulio De Luca (1912-2004). Destined to theatrical operas or music concerts, but also to collective meetings, the Arena («the first theater – specifically built for – outdoor mass shows»), was formerly conceived for 20,000 spectators, reduced in the final design to 12,000. The Arena could not be opened due to the entry of Italy in World War II that, in June 1940, led to the closure of the Mostra d'Oltremare. After the renovation in 1952, the Arena lived alternate seasons until the abandonment which motivated, not without controversies, its thoughtless demolition in 1989. The demolition of the masterpiece of the 1930s came with the guilty assent of the same architect who 50 years earlier had designed the building: Giulio De Luca, who signed the plan for the reconstruction in the same site of a new building, completed in 2001. The Arena Flegrea presents today problems of conservation at large and small scale. On the one hand, some crucial issues arise, concerning in particular the economic sustainability of the Arena's use, which at present is limited exclusively to the summer months. Secondly, some specific degradation problems stand out, partly due also to some original design choices, affecting in particular the surfaces of travertine cladding, the concrete of the side prospects, as well as the entire system of the rainwater draining. These issues need to be addressed promptly, in order to assure the survival of a masterpiece of the 20th century architecture.*

1 INTRODUCTION

The great exhibition complex of the *Prima Mostra Triennale delle Terre d'Oltremare* (1937-1940) in Fuorigrotta [1], in the western area of Naples, is undoubtedly the most significant architectural experience realized in Southern Italy in the first half of the 20th century [2]. It is a work of great commitment that was achieved in a few years and that testifies the emergence in Naples of a new generation of architects: the “rationalists”. In the plan of the scheduled works for the *Triennale*, a special attention was given to the buildings designed for shows and public events, among which the *Arena Flegrea* stood out, being «the first theater – specifically built for – outdoor mass shows» [3] for 20,000 spectators, to be destined to theatrical operas or music concerts, but also to collective meetings. The *Arena Flegrea* could not be opened due to the entry of Italy in World War II that, in June 1940, led to the closure of the *Mostra d'Oltremare*. After the renovation in 1952, the *Arena* lived alternate seasons until the abandonment which motivated, not without controversies, its thoughtless demolition in 1989. The demolition of the masterpiece of the 1930s came with the guilty assent of the same architect who 50 years earlier had designed the building: Giulio De Luca. It will be De Luca himself to sign the plan for the reconstruction in the same site of a new building, completed in 2001.

A little more than ten years after its last inauguration, the *Arena Flegrea* presents today problems of conservation at large and small scale. On the one hand, in fact, some crucial issues arise, as a part of a general program for the redevelopment of the *Mostra d'Oltremare* launched in 2005. They concern in particular the economic sustainability of the *Arena*'s use, which at present is limited exclusively to the summer months. Secondly, some specific degradation problems stand out, partly due also to some original design choices, affecting in particular the surfaces of travertine cladding, the concrete of the side prospects, as well as the entire system of the rainwater draining. These issues need to be addressed promptly, to avoid a state of neglect that can lead to further tampering, perpetuating the fatal destiny of the *Arena*, which seems like a «phoenix» that dies and revives again from its ashes [4].

2 HISTORY OF THE BUILDING

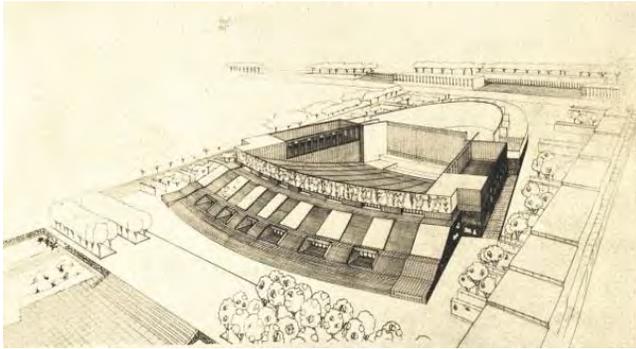
2.1 Giulio De Luca: from the first proposal to the final building (1938-1952)

The design of the *Arena Flegrea* was entrusted in 1938 to a young architect destined to become one of the main protagonists of the Neapolitan architecture of the 20th century: Giulio De Luca (1912-2004). That certainly had been a bold choice. In fact, not only the arena was one of the most representative buildings and the one with the greatest attractiveness of the entire public exposure, but also the largest, with a surface area of almost 14,000 square meters. The building therefore presented very delicate problems to the designer from a structural, technical, theatrical, and especially typological point of view because an outdoor “theater of the masses” for thousands of spectators was unprecedented. The arena would also have had to deal with political propagandist instances, in those years in which the new collective rituals of mass society – moreover in a totalitarian regime – crossed with the “spectacularization” of the policy sought by Mussolini as a fundamental consensus tool which demanded, for its representations and its liturgies, new and more appropriate “scenarios”.

The first proposal introduced by De Luca was that of a “reversible theater”. It consisted of an arena with a large circular stage surrounded by two parterres, which faced each other: a large semi-cycle and a broad flight of steps placed in a circular sector. In this way it would have been

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able to accommodate representations of Greek tragedies or melodramas, while the combined use of the two parts together would have made it possible for major events or public celebrations to be accommodated as well. Therefore this first project was proposing a bold and unprecedented association between an axial setting and a “centric” system, but it remained on paper not only because economic considerations prevailed, but also because some compositional and typological choices entailed considerable difficulties.



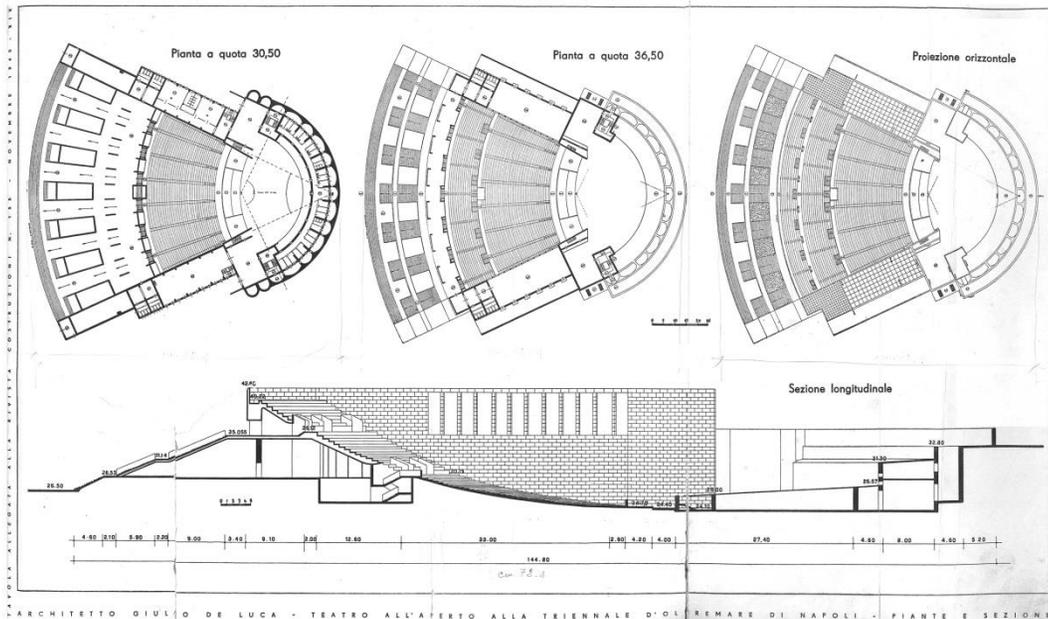
ARCHITETTO GIULIO DE LUCA - TEATRO ALL'APERTO - IL PALCOSCENICO DALLA CAVEA

1-2. The original design of the Arena Flegrea (left) and a photo of the works just completed in 1940 (right)

De Luca radically revised the project's typology and composition. He referred to a more traditional concept, and marked a decisive turn towards a more “classical” axial approach, restoring a clear distinction between audience and actors. At the same time, the number of spectators was drastically reduced to 12,000, according to that De Luca considered to be the maximum capacity allowed for an outdoor arena: it was a smart choice because the system, if implemented in the dimensions initially foreseen, would have required unsustainable management costs. Another important change concerned the principal axis of the arena that was originally planned in an east-west direction, was now oriented from north to south, to prevent spectators from having sunrays directly facing them, and also to have political gatherings in the morning or shows in the afternoon. De Luca, however, chose to place the audience in the south and the scene in the north, in the opposite direction both of the soil slope and of the winds which blow from south to north, i.e. in the reverse direction of the sound waves going from the scene to the public. No architectures of the Mostra d'Oltremare but only the natural landscape would have been such a magnificent backdrop to the shows. The relationship between Architecture and Nature, was of course a priority which De Luca considered to be much more important than all the orographic and solar constraints. The *Arena* would have been able to best fulfill the dual role of balancing the various components of the *Mostra* (architectures, exhibition stands, green areas) and, at the same time, of connecting with its outside, i.e. with the surrounding environment. This dialectic would have neutralized the rhetoric and monumental character which, despite some younger architects' contributions, would have nevertheless remained very strong altogether.

The *Arena* was made up of five parts: the block with the accesses and the two higher orders of seats; the *cavea inferiore*, partially interred; the two lateral wings; the semi-cycle in the north with the scene. The following are the dimensional data: the surface pit 4,200 square meters; stage area 3,400 square meters; proscenium width 30 meters; maximum amplitude of the stage 54 m; depth of the stage 48 m; surface of the services of the scene 1,512 square meters; surface of the travertine finishes 13,623 sqm. The southern block with the entrances was 114 meters long and 27 deep, rising over the altitude of the external square up to 8.50 m. The dual slope suggested the

image of a sort of “artificial hill”, evoked by the presence of a parterre of seven sectors. On the internal side, the block gently degraded and conformed to the *cavea superiore*, with a curve that went further down in the other areas for the public. De Luca abolished the traditional *facies*, and entrusted with the task to qualify aesthetically the main façade, the travertine staircases, the green carpets and the large frieze crowning, 6 meters high, that extended for all the 114 meters of the front with a large mosaic (by Nicola Fabbricatore, now lost), with figures of classic taste that traced a sort of “history”, through images, of the Italian theater. Not only had this frieze an aesthetic and semantic function, but it also worked as an acoustic barrier to the winds blowing from the south and, on the contrary, it did not disperse the sounds coming from the stage.



3. Plans and section of the Arena Flegrea, published in *Architettura*, 1-2, 1941.

The audience was contained in a large circular area with steps “excavated” into the ground according to the manner of the Greek theater. It ensured optimal visibility and acoustic performance for outdoor theaters, and thanks to its profile, it succeeded in establishing a fine relationship with the natural features of the context. The salient peculiarities of the scene are three: the slope of the stage opposite to that of the *cavea*; the organization of the whole movement of the trolleys carrying the scenes in a transversal direction to the longitudinal axis; and, above all, the conformation of the terminal in two stepped concentric rings, which placed it in an even closer relationship with the natural backdrop. This was a smart choice that allowed him to obtain from the stepped slope enough space to place a double leveled room both for storage and personnel services, and also to articulate the scene at various heights, making it very versatile from a theatrical point of view, neutralizing the two-dimensional flatness of the traditional grounds, typical of an axial setting. The two blocks on the sides of the pit, designed as “open foyer”, helped not to disperse the sound waves coming from the scene. Each one of them was structured into two parts: a small tower placed at the side of the proscenium stage and a higher volume which housed some service areas on the first level and a large balcony-terrace on the second. These grand lodges seemed to stand on a high base of tuff (adorned with reliefs), while some balconies on the opposite side to

the parterre allowed the viewers during the pauses of the shows to look out over the surrounding landscape and have an overall view of the *Mostra d'Oltremare*.

The whole complex of the *Triennale* suffered serious damages both because of the bombings during the war, and because of the two military “occupations”, first by the Germans and then by the Allies troops, which used the *Mostra* as an hospital from September 1943 to February 1947. Nearly the 60% of the complex was destroyed. The *Arena* survived, but with the exception of the atrium and other spaces used as a Post Office by the military, it was partly deprived of its marbles, fenced and then abandoned, with its *cavea* that year after year turned into a dense thicket of weeds. It was only with the initiative of Luigi Tocchetti, appointed president of the “new” *Mostra d'Oltremare* in 1950 [5], that the renovation of the *Arena* started, led by De Luca himself, who fully respected its original characters. The *Arena* could then finally be opened to the public on the 7th of July, in 1952, opening «a brief but intense period of summer theatrical performances which brought the masses to approach masterpieces of great cultural, artistic and aesthetic content: it was an operation of penetration and diffusion of the culture that deserved to grow, not to die miserably as it did. Then silence and neglect» [6].

2.2 Decline, demolition and reconstruction: the “new” Arena Flegrea

In the 1960s the activity of the *Arena Flegrea* was conditioned by the growing economic difficulties related to the operating costs of a structure that could remain open only three months a year. After the arsons of the stage in 1972 and 1973, and the earthquake of 1980, it was definitively closed to the public. After a project (unrealized) of 1976 signed again by De Luca in which for the first time a covering of the *Arena* was foreseen, at the end of the 1980s its conditions were so severe that the hypothesis to demolish it was seriously beginning to be considered. And it will be De Luca himself to take charge of demolishing it by signing technical reports that prescribed as the only possible solution that of the demolition of the building and subsequently, thanks to the funds for the works planned for the Football World Championship of 1990, its reconstruction in situ. It was a wrong choice on a technical level, since the *Arena* could be renovated; and a foolish decision on the cultural level. In this way the most remarkable building signed by a Neapolitan architect between the two wars as well as a document of great value from the standpoint of historical and architectural heritage went lost. In 1989, with a rare decisiveness in the chronic inaction of the Neapolitan scene, the *Arena* was thus dismantled in a few days. The works were contracted and began quickly, but the deadline of June 1990 was not respected and a year later, they were suspended. So, the risk that on the site of one of the most important buildings constructed in the 20th century in Naples could remain forever nothing more than a concrete skeleton, however, was averted by Camillo Federico, the new director of the *Mostra*, and by his successor Raffaele Cercola, who both managed to finance a new plan for completion of the works, entrusted to De Luca and Giuseppe Squillante. This led to the creation of the “new” *Arena Flegrea* in time for the beginning of the summer 2001 and on the 26th of July it was inaugurated by Bob Dylan’s concert.

Although the “new” *Arena* follows in its typology and dimensions the previous one – with the parterre as a shovel, the scene with its semicircular steps, the scenic towers framing the stage and the two side blocks – it shows some significant differences. They are the result of changed cultural and aesthetic orientations, but also of new logics more careful to the binding legislation and to the needs of artists and spectators. Overall, the new plant underwent a strong simplification of forms and finishes, with solutions that seemed to appeal to the most up to date language combinations, but also referencing Alvar Aalto or the poetry of *béton brut*, evoked by the large areas

without plaster of the extended prospects. The formal pre-existing repertoire was thus eliminated, refusing to revive both the parterre of the main front, and the mosaics and reliefs inside. The new theater, which had a different curvature different from the original, was divided into an upper *cavea* of 3,600 seats and a lower *cavea* of 2,400, to which two new large foyer were attached.

There are two predominant materials: travertine (for the bleachers, the side blocks, the scenic towers and the external front) and the concrete of the two large side façades. In the new plant the block shaped as an “artificial hill” disappeared in favor of a more contrasted and “constructivist” solution with “interlocking” volumes. For the finishes of the stage (with a much more marked elliptical profile) of the proscenium and of the orchestra pit wood was chosen instead, turning the scene into a real sound box, and introducing a warmer color note. Even the side blocks, which replaced the previous “lodges”, are covered with travertine cladding, and are fully “dumb” to the almost total absence of holes and expressive signs. These two blocks (shaped as a “saw tooth” in the lower part for acoustic reasons) are “cut” by inclined planes: the elusive perspectives that trigger in this way introduce dynamic accents that unhinge a plant otherwise too locked in its axial position and in its symmetry. The two scenic towers, finally, acquire a greater stereometric autonomy and a more marked connotation, with their upward taper, which allows these towers which have a rhomboidal plan to offer every time a different sight of them according to the point of view. From the stage they appear as two slender prisms isolated from everything; from the stands, however, they appear as massive pyramid trunked pillars, with surfaces animated solely by the inclusion of calibrated apertures strongly splayed and by the game of the grain of the travertine cladding. In general, the oblique cuts and the inclined surfaces characterize the most, especially inside, the expressive figure of a building that constitutes a kind of “testament” of one to one of the masters of the 20th century in Naples, and is one of the few public works of quality built in the city in the last decade of the last century.

3 PRESENT ISSUES OF CONSERVATION

3.1 The general methodology, from the master plan of 2005 to the present situation

The general issues of conservation of the Mostra d'Oltremare have been the subject of several methodological studies in the recent decades, as part of a growing interest on the architectural heritage of the 20th century. In 2005, in particular, the entire complex of the Mostra was proposed to be included in the Modern Heritage List of UNESCO, while at the same time, an urban plan (PUA) for its redevelopment was prepared by the Municipality of Naples. In this document (drafted by M. Echenique, full professor of Land Use and Transport Studies at Cambridge), the Mostra d'Oltremare is identified as an area for mixed use, part for conferences and exhibitions, and part for recreation and free time. This dual character affects the strategies of the plan, with a clear predominance of the economic outlook over the urban and architectural issues [7].

From the conservation point of view, the range of interventions provided in the 77 buildings that compose the Mostra, grouped into 55 units of intervention, focuses on the «restoration and conservative redevelopment» and «typological reinstatement», with the exception of four renovations and two substitutions of buildings. What is most perplexing is the solution of the «typological reinstatement», which means a reconstruction *à l'identique* of many lost architectures even if they were of modest value [8].

Today, about ten years later the approval of the plan, only a few interventions of restoration have been carried out, such as the *Palazzo degli Uffici* by M. Canino, transformed into a 5-star

hotel, the *Ristorante della Piscina* by C. Cocchia, the *Cubo d'Oro* by M. Zanetti, L. Racheli and P. Zella Milillo (which still presents, however, significant problems of degradation of its precious mosaics cladding [9]) and the *Fontana dell'Esedra* by C. Cocchia and L. Piccinato, whose restoration was completed in 2006 [10]. On the contrary, a good part of the buildings of the Mostra are in conditions of dangerous abandonment. Among these emerge certainly the pavilion of the Christian Civilization in Africa (then converted in the church of St. Francesca Cabrini) by R. Pane [11] and the Pavilion of the Italian Aegean Islands (or Rhodes Pavillion) by G.B. Ceas, both in such a severe condition that they risk to be permanently lost.

In 2013, the Mostra d'Oltremare has promoted the drafting of some conservation designs of its more degraded buildings, among which the ones before mentioned stand out, and even the *Arena Flegrea* itself. For these purposes, the Mostra has sought the cooperation of the Department of History of Architecture and Restoration of the University of Naples Federico II, through a specific agreement. The reflections hereby exposed, both on the historic and conservation topics, were conceived within this framework.

3.2 The present conditions of the Arena Flegrea

After thirteen years from the inauguration, the *Arena Flegrea* appears today, generally, in fair conditions, with some specific problems mostly due to seepage of rainwater or to the bad draining system, along with the decay phenomena on the finishing elements. These issues are partly attributable to some design choices and partly to defects in the execution of the work. We can subdivide the *Arena Flegrea* into three different areas, namely: 1) the entrance, the lower and upper foyer; 2) the *cavea*; 3) the stage and its space below, and the dressing rooms.

Regarding the first area, the conditions are generally discrete, with some significant degradation phenomena in the large space of the lower foyer, where we notice some widespread phenomena of rising damp with efflorescence in the basement structures and phenomena of moisture infiltration on the ceilings, due to faulty sealing of the bleachers of the parterre. On the upper foyer we experience different degradation phenomena, coming from the bad draining system of rainwater, which produces runoff on the upper exterior crowning of the great stairway. A specific problem is the poor draining of rainwater in the outer zone of the stairway, in correspondence to the frames of closure of the upper foyer, which causes large areas of stagnation, with the seepage of water into the foyer and consequent degradation.

The area of the *cavea* of the *Arena Flegrea* appears generally in discrete conditions. The entire space of the parterre is clad with travertine slabs that have moderate problems of surface degradation, mainly consisting of biological patina, stains and a sporadic presence of vegetation. The results of previous works of maintenance carried out by the Mostra d'Oltremare in recent years indicate, however, a significant problem with the sealing of the concrete structure of the parterre, covered by the above mentioned slabs of travertine. Localized interventions of replacement of the slabs have showed, in fact, that the waterproofing layer was formed by a discontinuous liquid sheath not very effective, the low seal of which has produced those phenomena of moisture infiltration on the ceiling of the lower foyer that have already been described in the previous paragraph.

Similar problems are observable in the two side prospects of the *cavea*, marked by a characteristic oblique profile that – as it has already been pointed out above – is the element of greater discontinuity of the last intervention by De Luca in comparison to the *Arena* existing until 1990, which was marked, as it is well known, by two large loggia-balconies with colonnades. These

inclined surfaces, entirely clad by slabs of travertine, have different degradation phenomena, including a sporadic presence of vegetation, biological patina and stains, the latter concentrated particularly in the lower zones, corresponding to the drainpipe of rainwater. Finally, the outer prospects of the *cavea* are in concrete without any coating or plaster. As highlighted in the previous paragraphs, it is very likely that this corresponds to a precise finish design choice rather than to a variation in the execution due to the lack of funds. It is certain, however, that the concrete surfaces, lacking today of any protective treatment, appear particularly vulnerable to degradation, which could trigger a dangerous corrosion of the reinforcement.



4-5-6. Degradation of the travertine slabs on the side prospects of the *cavea* (left), of the wooden plank of the stage (center) and of the concrete surface of the stage towers (right), photo 2013.

The scene of the *Arena Flegrea* consists of a whole that includes the stage towers, the stage itself, the pit for the orchestra and the three levels of the dressing rooms. The general conditions of the two tall towers are good in the fronts facing the parterre, but they appear dramatically poor in the rear faces, uncoated and finished in *béton brut* (in analogy with the side prospects of the *cavea*), which present widespread degradation consisting in run-off, stains and biological patina. The orchestra pit and the stage present specific degradation in the two wooden plank walkways and – in the case of the stage – a more serious problem due to the lack of a draining system for rainwater, which leads to the inevitable and periodic flooding of the area under the stage. Finally, the area of the dressing rooms – hosted on three superimposed levels within the terminal ring that surrounds the stage – presents discrete general conditions, with only some problems of surface degradation on the roofs.

3.3 Guidelines for conservation

As it has been clearly pointed out above, the *Arena Flegrea* is – despite its troubled construction history – one of the most interesting and significant architectural works of the entire Mostra d'Oltremare and as such it requires great caution in the execution of any extraordinary maintenance. Notwithstanding that its destination for spectacles, with large crowds, requires special attention to functional and durability issues, it is essential to stress that the primary objective of any maintenance work must be the conservation of all the architectural values, symbolic and material

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that it contains and represents. Thus, the restoration of the *Arena Flegrea* may become an example of application, scientifically qualified, of the most recent guidelines for the conservation of modern architecture [12], serving as an effective referential paradigm for further and diverse projects of restoration and conservation, which can be extended to other buildings of the complex.

Since its inauguration in June 2001, the *Arena Flegrea* has undergone some interventions of extraordinary maintenance, mainly relating to the removal and subsequent relocation of some slabs of travertine cladding of the parterre, in order to improve the conditions of the underlying waterproofing of the concrete structure. Further work has been aimed at mitigating the effects of the phenomena of rising damp and infiltration in the foyer, as well as to maintain the planting system. With the project of the 2013, the Overseas Exhibition intends to pursue these operations of extraordinary maintenance, systematically addressing the main problems already discussed, linked to the poor waterproofing system of the *cavea*. It is instead at the stage of a simply study the possibility of covering the *Arena*, designed to ensure not only a greater protection from the atmospheric agents, but above all the possibility of extending the use of the large space for performances to the wintertime. This hypothesis would be, however, a choice of great architectural and technical impact, which would result as a significant transformation of the space of the *Arena*, that has to be assessed with caution.



7-8. The removal of the travertine slabs on the bleachers of the *cavea* (left), and a particular of the poor sealing between the slabs and concrete structure of the parterre (right), photo 2013.

The analysis of the critical issues developed in the previous sections shows that one of the most important aspects of the current state of the *Arena* concerns the topic of exposure to the rainwater, resulting in problems of seepage, surface degradation of stone surfaces in travertine and other secondary phenomena triggered by these processes. The need to significantly improve the sealing of the travertine slabs must be dialectically reconciled with the preservation of the material and formal authenticity of the architectural work. As a result, therefore, two kinds of prob-

lems of greater importance stand out: the sealing of travertine slabs, in particular those that make up the coating of the *cavea*, and the surface treatment of them, which aims to remove the degradation phenomena.

The primary objective of the measures to improve the waterproofing of the *cavea* must be the protection of the underlying structures from seepage and from the consequent phenomena of the degradation of the concrete slab that forms the *parterre*. Not a secondary objective, as already mentioned in the general criteria, is the preservation of the material authenticity of the original slabs of travertine. After a thorough survey and mapping of the degradation of the entire surface of travertine, the operations of removing the slabs will proceed with extreme caution, only where strictly necessary. The slabs will be carefully identified and cataloged, to preserve them in the vicinity of the jobsite. After removing the slabs, the demolition operations of the screeds shall be carried out by hand, so as not to damage the underlying structure in concrete. The operation will then proceed with a thorough cleaning, in order to prepare the surface for the application of an epoxy primer on which it will be laid a double layer sheet of waterproof sheath, whose thickness has to be not less than 4 mm. Then a sheet of polyester protection will be placed there. The relocation of travertine slabs will have to follow the same precautions taken for their removal and must strictly abide by their original position.

A second key aspect concerns the degradation of the surface slabs of travertine, consisting in stains, biological patina, and localized presence of vegetation. These phenomena appear to be more accentuated in correspondence with the areas of stagnation of rainwater, as in the gutters of the side walls and in the highest part of the *cavea*, where the defects of the slope generate greater difficulties in draining water. The project objectives include: the cleaning of the travertine slabs from stains, biological patina and surface deposits; the controlled removal of vegetation, where present; the preservation of the material authenticity of the original covering slabs of travertine through the protection of the natural patina given by time; the final protection of the surfaces in order to slow down the onset of future degradation mechanisms.

The cleaning operations must be preceded by the removal of weeds, if any, that must be done by hand, after the application of biocides to limit the damages due to the root system. For the cleaning techniques it is suggested to avoid any treatment that risks the damaging of the patina of natural travertine. Therefore, one can proceed with the application of water nebulization through nozzles not directly oriented on the surface. This treatment allows the visual control of the cleaning and the possibility to calibrate the ongoing intervention according to the treatment progression. The application of biocides for the removal of the biological patina, which must be compatible with the stone and not harmful to the operators, may be done through nebulization as well. At the end of the cleaning, it is recommended the application of a protective water repellent and breathable wax, specifically suitable for travertine, which limits the onset of degradation mechanisms in the future.

4 CONCLUSIONS

The *Arena Flegrea* today is a great resource, and at the same time, a great problem. The question of how to make the largest outdoor theater in the South of Italy productive is, in fact, still unresolved. To face this issue in a rational way new initiatives and maybe also brave architectural choices are required, these could help, in particular, amortizing the high costs imposed by a large theater used only a few months a year, and the high costs for the continuous maintenance required by an outdoor plan. These two issues relate to the survival of the *Arena*, as a public work

that has to be looked at as an asset and not as a burden to the Mostra d'Oltremare and for the community. These two issues, obviously, are linked together and force us to reflect on the possibility of a new roof: a delicate and challenging choice from multiple points of view. In the meanwhile, it is fundamental to carry out the necessary interventions of maintenance, which cannot be postponed. Among them, the improvement of the draining system, the sealing of the travertine slabs and the surface treatment of them appear basic to assure the survival of this masterpiece of the 20th century architecture.

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Although the present paper is the outcome of a collective work between the two authors, par. 2 is written by Giovanni Menna and par. 3 by Andrea Pane. The introduction and the conclusions arise from a collective synthesis made by the two authors.

- [1] The general plan of the *Mostra d'Oltremare* was designed by Marcello Canino. In the Technical Committee were included, among others, Alberto Calza Bini, the Dean of the Faculty of Architecture in Naples and Girolamo Ippolito, professor of Hydraulic Engineering at the Politecnico of Naples, while the most important roles were covered by Luigi Tocchetti, Adriano Galli and the roman architect Ernesto "Bruno" Lapadula, chiefs respectively of Technical Office, Projects Office and Head Office Decoration. The Commissioner General for the Government, which should be ascribed to the main merit of the success of the company, was the lawyer Vincenzo Tecchio (1895-1953).
- [2] The bibliography on the *Triennale delle Terre Italiane d'Oltremare* is extremely wide, and has been enriched by many titles especially in the last two decades. See the bibliography above.
- [3] Anon. 1940.
- [4] Gravagnuolo, B. 2006: 69.
- [5] In 1948 the «Ente Mostra Triennale delle Terre Italiane d'Oltremare» changed its name in «Ente Autonomo Mostra d'Oltremare e del Lavoro Italiano nel Mondo».
- [6] De Luca, G. 1978.
- [7] Belfiore, P., Stenti, S., 2006: 74.
- [8] *Ibidem*: 77.
- [9] Falcone, M. 2012: 188-195.
- [10] Russo, V., Vassallo E. 2011: 58-60.
- [11] Castagnaro A. 2010: 125-130.
- [12] For an updated bibliography on the topic of the conservation of Modern heritage in Italy see *Confronti. Il restauro del moderno*, 1, 2012.