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Roma 2021

ROMA, CAPITALE D'ITALIA 150 ANNI DOPO

VOLUME SECONDO

Preesistenze architettoniche Aree archeologiche - Paesaggio

a cura di

CALOGERO BELLANCA e CECILIA ANTONINI LANARI



REUSO 2021
ROMA, CAPITALE D'ITALIA 150 ANNI DOPO

Roma 1-2-3 dicembre 2021
Facoltà di Architettura Sapienza Università di Roma

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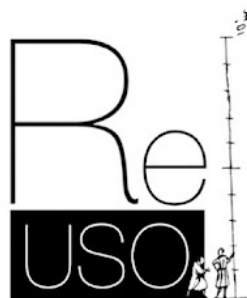
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ROMA 2021

Roma, capitale d'Italia 150 anni dopo

VOLUME SECONDO

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Editoriale Artemide s.r.l.
Via Angelo Bargoni, 8 - 00153 Roma
Tel. 06.45493446 - Tel./Fax 06.45441995
editoriale.artemide@fastwebnet.it
www.artemide-edizioni.it

Editore

Vincenzo Innocenti Furina

Segreteria di redazione

Antonella Iolandi

Impaginazione

Monica Savelli

ISBN 978-88-7575-405-1

Si precisa che Calogero Bellanca è curatore della Sezione 3 e Cecilia Antoini Lanari è curatrice delle Sezioni 4 e 5.

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NOT JUST WOOD.
THE FISHING MACHINES OF THE CENTRAL ADRIATIC

Lucia Serafini, Noemi Di Toro

ABSTRACT

The Fishing Machines are factories used by fishermen, which have been built since the end of the eighteenth century and which over time have acquired a landscape value that has become essential in the skyline of the territory. The aim of this essay is to pinpoint products which today are mainly in a state of neglect or which are turned for tourist purposes that are not always consistent with their structure. On the basis of direct surveys, carried out by the authors on individual factories and their contexts of reference, the attempt is to trace the history of the construction of an important element of Italy's Adriatic coast, in order to outline programs of management of its heritage, both with regard to the theme of conservation and protection and with reference to the theme of reuse.

Key words: Fishing machine, Adriatic Sea, wooden constructions, local identity, restoration

1. INTRODUCTION

The name 'Fishing Factories' (*fabbriche da pesca*) that Gabriele d'Annunzio (Pescaia 1863 - Gardone Riviera 1938) gave to what are called *trabocchi* on the Abruzzese coast at the centre of the Eastern Adriatic shoreline eloquently provides the meaning and motives of a territory that has always found one of its main sources of sustenance in the resources of the sea. With the expression 'fabbriche da pesca', the great Abruzzese poet and writer in fact refers to a building that is fabricated – and thus handmade – and to its precise role: being of use for fishing, but without the employment of traditional boats.

Compared to traditional boats, the trabocco building took the place of a sort of vessel not brought out onto the open sea, but left halfway between land and sea. For this reason, its construction is more complicated and articulated than that of normal fishing boats, as it is called upon to perform the same function while also having to grapple with contingent circumstances linked to the movements of seawater and the need to ensure stability and safety characterizing a land-bound building.

In its various dialectal articulations, the word ‘trabocco’ indicates a construction in wood, built entirely or partially over the water but always in proximity to the coast. The difference between the two main types is ascribable to this circumstance. Pier trabocchi (‘trabocchi di molo’) are called by that name because they are anchored to a pier, often at a port; rock trabocchi (‘trabocchi di scoglio’), on the other hand, have a more or less long bridge that provides access to a bottom deep enough to allow fishing.

In having its main contact with the water, the construction technique for trabocchi is similar to that of pile dwellings, and descends from them also in forms and materials. Like pile dwellings, they are in fact light structures, with empty spaces prevailing over solid ones as the only guarantee to allow the waves to move through, and if anything conditioned only by the type of fishing that is practiced, and by the craftsman’s attention to the individual details.

However, trabocchi stand apart from pile dwellings by having never been considered actual places to live. As will be discussed, it is in fact only recently that they have abandoned their fishing function in order to accommodate hospitality activities or new articulations of the beach home, at times rented directly by the owners to transient tourists.

2. THE TRABOCCHI COAST BETWEEN A TERRITORY’S GEOGRAPHY AND ITS RESOURCES

Present along the entire Adriatic and Tyrrhenian coastline, trabocchi are particularly concentrated along the central Adriatic, in the section of the Abruzzo region that includes the province of Chieti that was recently renamed “Costa dei Trabocchi” or the “trabocchi coast” to enhance its material and scenic value, also for the purposes of protecting and safeguarding it. This 55 km stretch between the municipality of Ortona to the north and that of Vasto to the south, on the border with Molise, boasts 31 trabocchi, on average one every one and a half kilometres. Situated generally near promontories or rocky peaks, they characterize the sea line to the point of determining a line of clear demarcation from the rest of the territory. There are no documents about them explaining their origin and developments. The only documentation that may be found in fact regards transfers of ownership, at times supported by a precious oral tradition provided by the last of the *traboccanti*.

On the stretch along the Chieti coastline, the trabocchi system was favoured by the presence of medium and low rocks alternating with sandy, rocky beaches and with limited swells. Depending on the situation, the trabocchi are of both the rock and pier type, but with a prevalence of the former, since pier trabocchi account for only six instances out of 31, located mostly near the port of Vasto.

In their current configuration, the trabocchi along the Chieti coast are dated mostly to the second half of the nineteenth century. In reality, the rich literature on the subject agrees in deeming them to be far more ancient constructions whose permanence, in terms of both structural components and function, was ensured

by a concept of maintenance that involved repairing their deteriorated parts, or replacing those beyond remedy, while always staying faithful to tradition when it came to techniques and materials. As is known, this faithfulness to tradition is common to all historic shipyard work; however, in the case of the trabocchi it was enhanced by the fact that these are constructions whose lifetime is not very long, since they are made of wood and built partially or totally on the water, and are therefore exposed to the inclement phenomena of the sea and attack by salt. Another circumstance favourable to ordinary maintenance has always been the prevalently mortarless construction that characterizes them, making them easy to disassemble and repair using working apparatus that is simple and elementary – and therefore manageable by not necessarily specialized labour.

This faithfulness to tradition is likely to have gradually ensured the adjustment of certain parts, thereby improving the structure's stability and duration without altering its material identity. This is what took place, for example, with the appearance of supplementary elements for supporting and bracing the base structure.

Thanks to the availability of resources in the local setting, the most-used tree species were oak or holm oak for the beams, which withstand atmospheric agents, and manna ash, hornbeam, and yew, light and easy to work, for the wedges to be jammed into the rock and for supporting the foundation structures. Natural resins were used to impregnate the heads of the beams and to treat the nets and the hemp ropes.

The first leap in the trajectory of the long history of the trabocchi on the Chieti coast dates to the second half of the nineteenth century. The passage of the Adriatic railway, which in 1863 arrived on this stretch of coastline to connect the north and south of the eastern side of the peninsula, brought with it the use of techniques and materials with better guarantees of stability and duration. It was from this moment that Portland cement began to be used for the foundations in lieu of wooden wedges, and iron in place of wood – or, more frequently, in association with wood. Of great interest, for example, is the systematic use of segments of railway tracks sealed with concrete, extended with wooden beams bolted or tied to them with cordage. Also connected to this same period is the use of steel ropes in place of hemp ones for connections, and bolts in place of hemp cordage for the joints.

As to the traditionally used tree species, at this time robinia, known for its qualities of hardness and fire resistance, began to be used. Robinia was imported from Australia during those years to stabilize landslide-prone embankments, but its use also extended to other wooden constructions along the coastline. Only when robinia was unavailable did reliance on the varieties common in the woods of the coastal strip continue.

The use of new materials has led some to speak of second-generation trabocchi, certainly safer and less primitive, insofar as the changes are absolutely

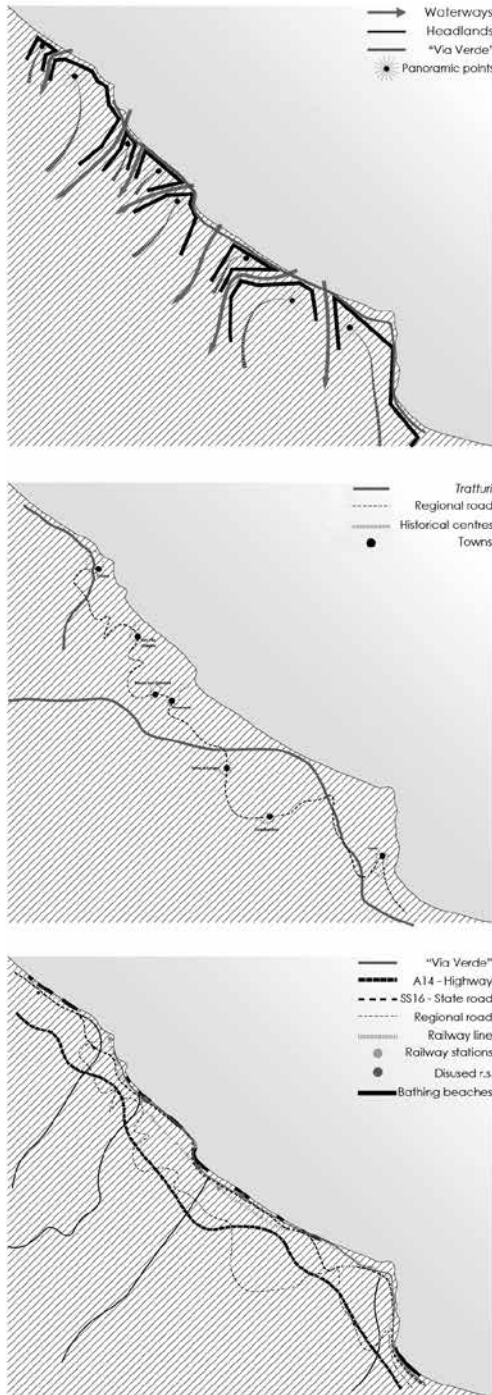


Fig. 1: Costa dei trabocchi, Abruzzo – Mapping of existing trabocchi (photos: Noemi Di Toro, 2019).



consistent with the material and formal setting, and therefore such as not to modify their identity and relationship with the landscape of reference. The same discourse applies to the trabocchi rebuilt during the twentieth century, and especially after the Second World War, when the abundance of railway pieces made available by the abandonment of the routes destroyed by acts of war popularized their reuse for foundation and stabilization structures. A similar situation could be found in subsequent decades, as pine and fir poles carrying electricity and phone lines were systematically removed on the territory due to technological progress, thus providing encouragement to reuse the waste materials.

To make the new foundations, the latest reconstructions also saw the frequent use of cement-filled barrels, or of cubic plinths, also in cement. A more radical alternative is the use of a cement platform that serves as a base for the vertical pilings.

3. PARTS FOR THE WHOLE: THE FUNCTIONAL ELEMENTS

The trabocco is an organism in which the individual components have a precise role in the context of the construction, and form a structure that, although apparently light and precarious, is actually formed by sturdy, linked frameworks. This is why the distinction among the parts may be made only in a wholly conventional and didactic way, as it is the reciprocal action among them that acts as a structure and guarantees their function. In this setting, supported by careful surveys, reference will obviously be made to existing trabocchi, and therefore to the ones that were over time subject to the minimum transformations already discussed as relates to materials and techniques, as the forms have remained practically unchanged, albeit often larger in their surface area.

The only fundamental distinction between the pier and rock trabocchi is the *passarella*, a sort of bridge between dry land and the sea; depending on its length and layout, it is certainly the element that most characterizes not only the trabocco as such, but also the landscape in which it is set.

In the pier trabocchi, the correspondent of the walkway generally consists of a more or less steep stairway that, from the pier level, leads to the platform destined for fishing operations.

The length of the bridge is governed by the need to reach a depth sufficient to allow fishing. In the same manner, its shape, at times suggestively sinuous, is conditioned by its position on the rocks and therefore by the need to find solid anchorings which are otherwise made directly on the sand.

The bridge is generally supported by piers, often in pairs, connected to one another with horizontal beams in turn surmounted by other pairs of orthogonal beams supporting the closing planks. In certain cases, the piers are stiffened by cross braces. On some trabocchi, modifications made in recent decades have widened the bridge from 50-60 cm to 100-120 cm.

The system of foundations used for the bridge is naturally similar to the one

used for the entire structure, with the variations required by the circumstances in terms of distance between piers, and any bracing between them. This is also the case for the fishing platform (*piano di pesca*), a fundamental component of the trabocco, the one that gives it meaning and its reason to exist, and depending on which all the other components are arranged. It is an open surface, once no greater than 25 m² in area, and perched about five metres above the sea – that is to say enough to accommodate the waves, especially during winter periods.

Above all, the pier trabocchi also have a portion cantilevered over the fishing platform, called in fact a *balcone* or *terrazza*. In general, the cantilever is supported by oblique struts and not vertical ones as the front portion is.

At the centre of the fishing platform is the *winch*, the element that operates the net in the fishing operations. The winch is formed by a system of wooden arms called *pennoni*, which are built using a joint with several piles, and a system of stays holding them up and anchoring them to sturdy vertical piles called *codittori*. With the arrival of new materials, the traditional wooden winches were replaced by iron ones. In certain cases, recent innovations have opted for the installation of motorized mechanisms.

Usually distinguished into *antenne* and *antennine* depending on their size in terms of both length and width, the *pennoni* extend out to sea, using pulleys at their ends to manoeuvre the ropes and activate the nets. Galvanized wire rods, hooks, and clamps positioned at various heights are the indispensable supplement for the entire system's operation. It is in fact clear that the more the parts are mutually connected – not only among themselves but also with the rocks in the rock trabocchi and with the pier in the pier trabocchi – the more possible it is for the system to withstand the stresses and dynamic forces induced by the waves and to ensure its greater likelihood of longer life.

Above the fishing platform is the shack, or *capanno*: an environment facing out onto the winch, closed on four sides and with a flat or two-eaved roof. Originally used only to house fishing equipment, the shack is the environment that has over time seen the most variations in terms of size and use. The fashion of using it for hospitality activities or even as a beach dwelling has increased its very small size, and endowed its interior with furnishings and equipment functional to the various uses.

4. THE MYTH OF THE SHIP OF THESEUS AND THE PROTECTION OF TRABOCCHI

Today, the 31 trabocchi present on the Chieti coastline are for the most part privately owned, and only one third of them are subject to the restrictions established by current protection laws.

The restricted trabocchi include the one called Turchino, on the marina of the municipality of San Vito. This rock trabocco specimen is one of great beauty and charm, thanks also to the very long bridge that is the mark of its “skyline,” which

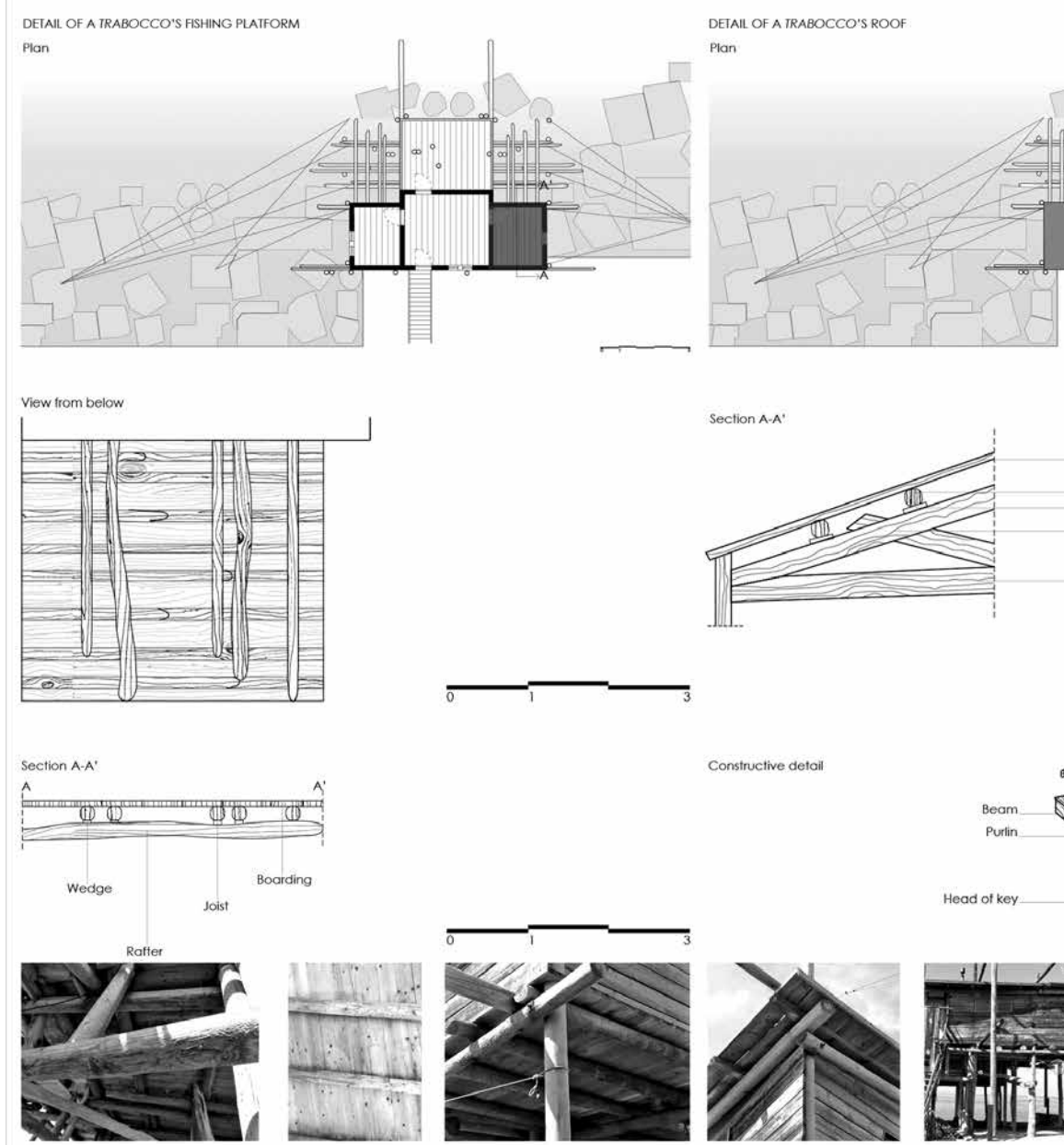
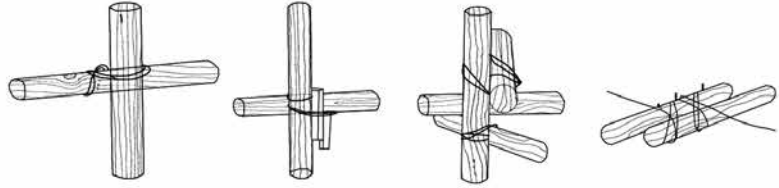


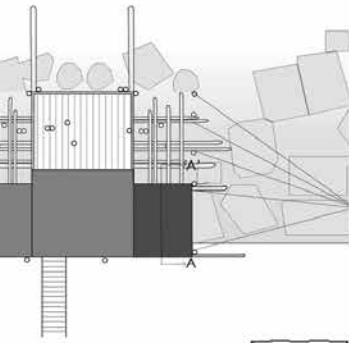
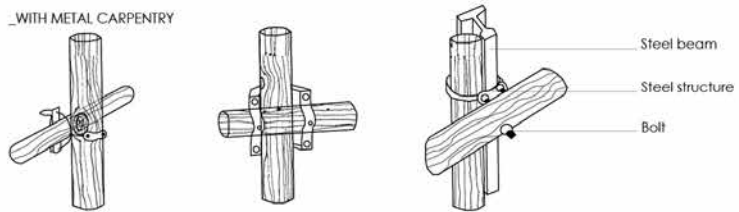
Fig. 2: Costa dei trabocchi, Abruzzo – Details of the building elements (photos: Noemi Di Toro, 2019).

MAIN CONNECTION SYSTEMS BETWEEN HORIZONTAL AND VERTICAL ELEMENTS

_ WITH ROPES AND CABLES

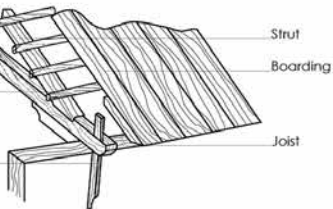
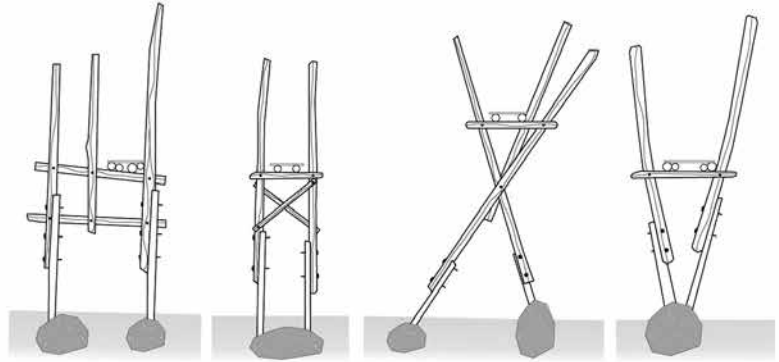


_ WITH METAL CARPENTRY



- Boarding
- Ridge beam
- Wedge
- Junction
- Beam

MAIN SUPPORT SYSTEMS TO SUSTAIN THE PASSERELLA



can be seen as perfectly symboling all trabocchi on the Chieti coastline and elsewhere. Built in 1871 – but like all the others partially or wholly rebuilt on several occasions over the course of time – it became public property in 1980, and has since then attracted great attention also from the standpoint of its maintenance interventions. Today, it hosts events and workshops, and is a major tourist attraction.

Compared with the situation of the Turchino trabocco, most similar structures have had a different fate. More than one half of the trabocchi on the Chieti coastline have now become restaurants, and of the remaining ones, several are completely abandoned – with bridges and fishing apparatus that are crumbling or missing altogether – while others have lost their original fishing-related function and have been transformed into dwellings, used by the owners directly or rented out during the summer. It also bears pointing out that fishing from trabocchi has also been discouraged in recent decades by the pollution generated by industrial activities along the coastline, which only recently have been brought back to more sustainable relations with the environment and its resources.

Being machines used traditionally for fishing – and therefore as productive buildings to all effects, albeit only for staple goods –, trabocchi may be considered a particular articulation of what is termed ‘industrial archaeology’. As is known, this has for some decades been associated with the category of cultural heritage, with all that follows in terms of protection, recovery, and reuse. However, while this is true from the theoretical standpoint, it is not so from the standpoint of current practice, given that there are still too many episodes of abandonment and destruction of what remains of that heritage. The pretext is often that interventions to adjust old buildings to uses different from the original ones are difficult and expensive, especially in times of economic crisis and scarce financing. When adding to this the specific identity of apparently fragile buildings like trabocchi, with a dimension of habitation absolutely restricted because it is limited to the presence of the shack, one may understand the difficulty of confining them within an overall network subjected entirely to protection, and as such carefully managed in conservation and valorization actions.

In other words, careful supervision of these actions means that the current restaurant and habitation uses may also be admitted. In fact, the clear demarcation lies not in the use in and of itself, but in how it is carried out, which is to say the means and ways adopted to develop it, at a time when the old know-how has gone missing in the folds of an oral tradition now largely lost. The new generations not only no longer aspire to seeking survival economies to which trabocchi were linked, but also struggle to understand them outside commercial and speculative logic, and thus to grasp the material and historic culture that supports them.

The dearth of knowledge of this culture, like much of the heritage to which trabocchi, as has been mentioned, may be likened, presents a real risk to their survival. The tradition of wood that is characteristic of them, like that of the complementary

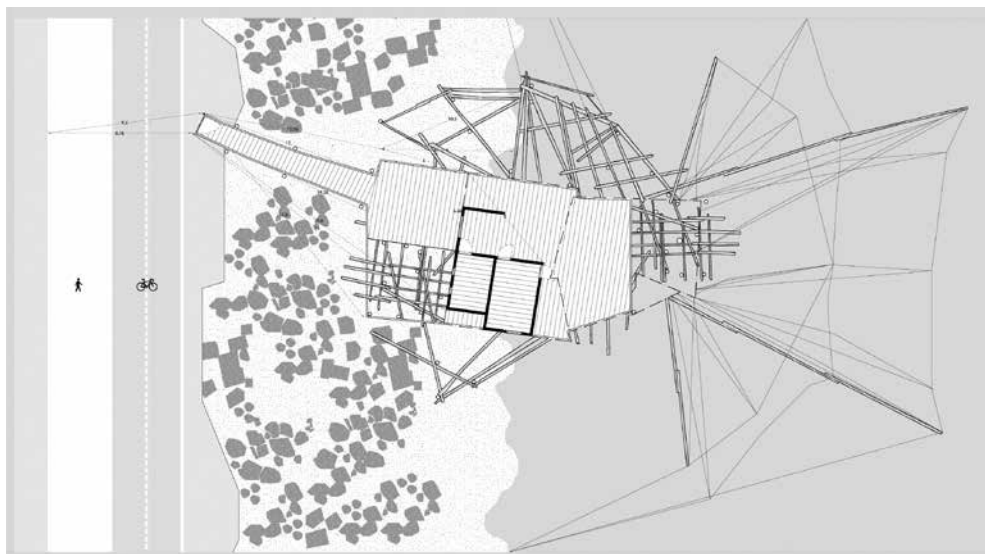


Fig. 3: Trabocco Punta Fornace, San Vito Chietino, Abruzzo – Architectural relief of Punta Fornace.

materials that over time have optimized their use and operation – albeit with the minimum changes brought about by technological progress –, is their chief inheritance, and as such to be kept and preserved for the present and future.

In support of the principles that have guaranteed their survival down through the centuries, the rule of Ship of Theseus's appears to apply to trabocchi to this day – which is to say the performance of operations of assiduous, constant ordinary maintenance to ward off the risk of the gradual replacement of the individual parts, and then relying on it, where necessary, while remaining faithful to the mastery of tradition, and if anything merely renovating it on the basis of acquired experience and the inevitable refinement of techniques.

The Adriatic coast has no scarcity of cases of replacement of old trabocchi with modern likenesses, that for economic and practical reasons have opted for materials other than wood, thereby violating not only the memory of the ancient ones, but also the landscape of reference, already often heavily altered by the indiscriminate urbanization that has affected the entire coastal strip in recent decades.

Starting in 1994, specific regional laws have offered measures for recovering and valorizing the trabocchi on the Chieti coastline, seeking to bring order to the debate over their conservation arising during those years. These laws initiated financing supported by the production of a specific guide to the maintenance of the trabocchi, published in 2014 and edited by Professor Cristina Forlani at D'Annunzio University of Chieti – Pescara.

Also bringing new topics to the cause of trabocchi was the abandonment,

completed in 2006, of the stretch of railway built after Unification, which was moved to higher terrain and placed mostly below ground. For the resulting areas, an ambitious project is in fact underway to build green roads that appear to offer new scenarios for the remaining heritage and to gain greater (and not only physical) distance of the coastline and the trabocchi network from the parallel national road that runs alongside it and from the development – beach houses, holiday resorts, and hospitality activities – along its path. It is also true that, alongside a disorderly urbanization especially in certain points that attract the most tourism, an evocative, spontaneous plant life of alternating olive and citrus groves has survived. And that is not all. In the proximity of certain trabocchi, the setting is enriched by the presence of old abandoned railway stations and Hoffmann kilns: all are elements that can be re-networked with the trabocchi and ensure a valorization of the territory consistent with its values.

Interest in the issue of trabocchi also explains the protocols that, starting July 2019, initiated the procedure for the declaration of cultural interest of many of those remains, which is essential for the regional-level definition of an organic and definitive set of regulations.

That the trabocchi are not just “wooden constructions” appears to be an accepted fact. Yet, if there is no intervention with maintenance programmes repeated over time, they will be unable to survive. It is known, for example, that the pine and robinia of which the majority of them are still largely built require maintenance every five years or so, assuming that the structure has not suffered catastrophic storms, and that the damage to the wood occurring in the meantime has not promoted infiltration and/or attacks by wood-eating insects, mould, and fungus. Then there is the rust-prone ferrous material of the joints, which the latest, empirical results gathered by the trabocchanti themselves have shown do not require the decayed element to be removed, or abrasive treatment to be applied, but for them to be rigorously maintained, since, paradoxically, it is the rust itself that guarantees the right friction and the necessary cohesion of the knots.

Local history, and the history of materials and of the construction techniques of a place and its resources, and a landscape, in the case of the Chieti coastline, within reach not only of the sea but of the hills of the central Apennines nearby, appear to be the coordinates of a territory in which the episode is lost in favour of the whole, and in which the transition from the particular to the general appears automatic. Local history and total history converge in this case in a paradigm – that of the trabocco – that, in the final analysis, provides a pretext for speaking about managing the territory and maintaining its identity, while never losing sight of the lesson of sustainability that comes from the past, when the use of resources, whether or not in wood, was always compatible with their possibilities, and with the possibilities of those who could make use of them.

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